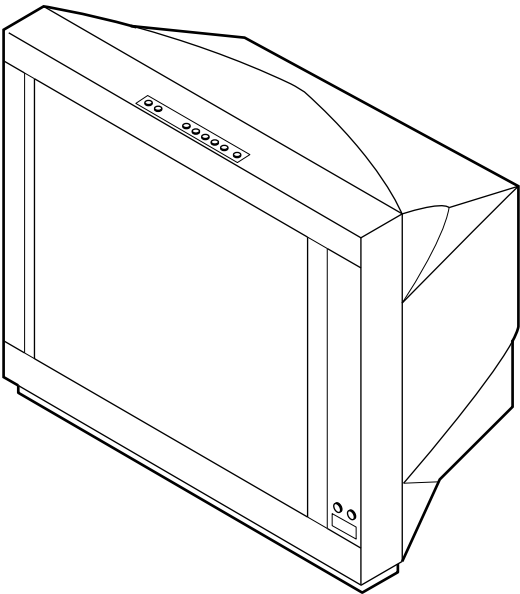
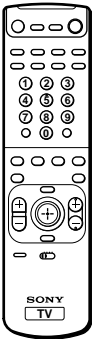


# SERVICE MANUAL

# AG3 CHASSIS

<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST.</u>	<u>CHASSIS NO.</u>	<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST.</u>	<u>CHASSIS NO.</u>
KV-ES34M31	RM-916	OCE	SCC-P29B-A				
KV-ES34M61	RM-916	GE	SCC-P35A-A				
KV-ES34M80	RM-916	ME	SCC-P32C-A				
KV-ES34M90	RM-916	JE	SCC-P34B-A				



TRINITRON® COLOR TV  
**SONY®**

## SPECIFICATIONS

		Note
<b>Power requirements</b>	110-240 V AC, 50/60 Hz	
<b>Power consumption (W)</b>	Indicated on the rear of the TV	
<b>Television system</b>	B/G, I, D/K, M	
<b>Color system</b>	PAL, PAL 60, SECAM, NTSC4.43, NTSC3.58	
<b>Stereo/Bilingual system</b>	NICAM Stereo / Bilingual B/G, I; A2 Stereo / Bilingual (German) B/G	Except KV-ES34M80
<b>Teletext language</b>	English, Arabic, French	KV-ES34M31/ES34M61 only
<b>Channel coverage</b>		
<b>B/G</b>	VHF: E2 to E12 / UHF: E21 to E69 / CATV: S01 to S03, S1 to S41	
<b>I</b>	UHF: B21 to B68 / CATV: S01 to S03, S1 to S41	
<b>D/K</b>	VHF: C1 to C12, R1 to R12 / UHF: C13 to C57, R21 to R60 CATV: Z1 to Z39, S01 to S03, S1 to S41	
<b>M</b>	VHF: A2 to A13 / UHF: A14 to A79 / CATV: A-8 to A-2, A to W+4, W+6 to W+84	
<b>⏏ (Antenna)</b>	75-ohm external terminal	
<b>Audio output (Speaker)</b>	15W + 15W	10% distortion
<b>Number of terminal</b>		
📺 (Video)	Input: 4    Output: 1	Phono jacks; 1 V <sub>P-P</sub> , 75 ohms
🎵 (Audio)	Input: 4    Output: 1	Phono jacks; 500 mVrms
📺 (S Video)	Input: 2	Y : 1 V <sub>P-P</sub> , 75 ohms, unbalanced, sync negative C : 0.286 V <sub>P-P</sub> , 75 ohms
📺 (Component Video)	Input: 1	Phono jacks Y : 1 V <sub>P-P</sub> , 75 ohms, sync negative C <sub>B</sub> : 0.7 V <sub>P-P</sub> , 75 ohms C <sub>R</sub> : 0.7 V <sub>P-P</sub> , 75 ohms Audio : 500 mVrms
<b>DIGITAL IN</b>	Input: 1	Phono jack; 0.5 V <sub>P-P</sub> , 75 ohms
🎧 (Headphone)	Output: 1	Stereo minijack
<b>Picture tube</b>	34 inch	
<b>Tube size (cm)</b>	86	Measured diagonally
<b>Screen size (cm)</b>	80	Measured diagonally
<b>Dimension (w/h/d, mm)</b>	859 × 650 × 573	
<b>Mass (kg)</b>	84	

Design and specifications are subject to change without notice.

### CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

### SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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## SELF DIAGNOSTIC FUNCTION

The units in this manual contain a self-diagnostic function. If an error occurs, the STANDBY/TIMER lamp will automatically begin to flash.

The number of times the lamp flashes translates to a probable source of the problem. A definition of the STANDBY/TIMER lamp flash indicators is listed in the instruction manual for the user's knowledge and reference. If an error symptom cannot be reproduced, the remote commander can be used to review the failure occurrence data stored in memory to reveal past problems and how often these problems occur.

### 1. DIAGNOSTIC TEST INDICATORS

When an errors occurs, the STANDBY/TIMER lamp will flash a set number of times to indicate the possible cause of the problem. If there is more than one error, the lamp will identify the first of the problem areas.

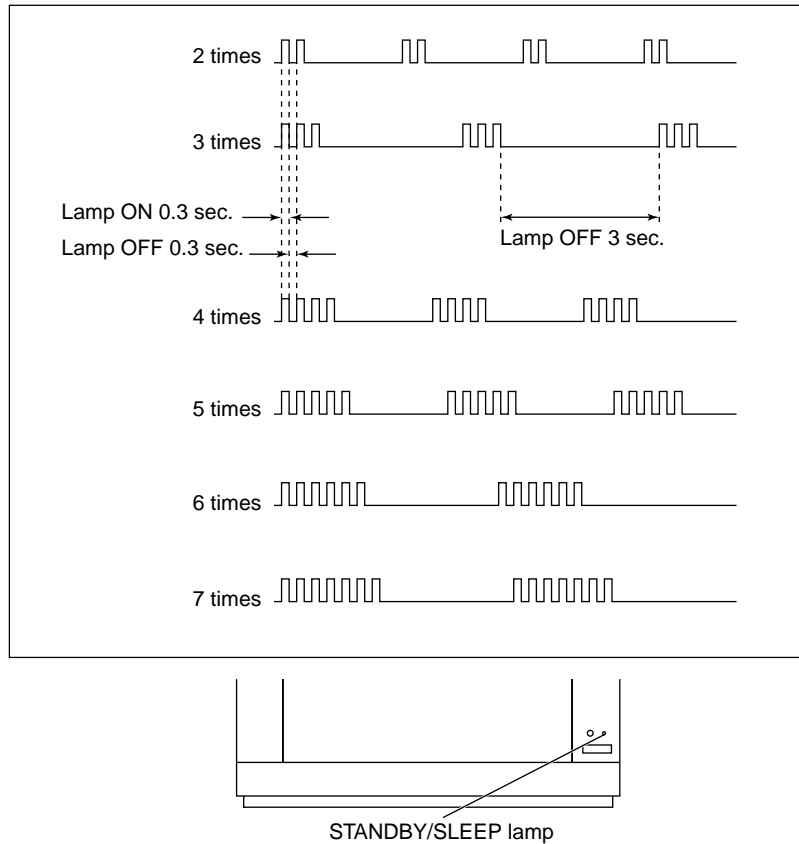
Result for all of the following diagnostic items are displayed on screen. No error has occurred if the screen displays a "0".

Diagnostic Item Description	No. of times STANDBY/TIMER lamp flashes	Self-diagnostic display/Diagnostic result	Probable Cause Location	Detected Symptoms
• Power does not turn on	Does not light	—	<ul style="list-style-type: none"> <li>• Power cord is not plugged in.</li> <li>• Fuse is burned out F1601 (F1 Board)</li> </ul>	<ul style="list-style-type: none"> <li>• Power does not come on.</li> <li>• No power is supplied to the TV.</li> <li>• AC power supply is faulty.</li> </ul>
• +B overcurrent (OCP)	2 times	002:000 or 002:001~255	<ul style="list-style-type: none"> <li>• H.OUT Q6807 is shorted.</li> <li>• H.LIM Q6810 is shorted.</li> </ul>	<ul style="list-style-type: none"> <li>• Power does not come on.</li> <li>• Load on power line is shorted.</li> </ul>
• +B overvoltage (OVP)	3 times	003:000 or 003:001~255	<ul style="list-style-type: none"> <li>• PH 6602 faulty.</li> <li>• 10.5V is not supplied. (D board)</li> </ul>	<ul style="list-style-type: none"> <li>• Power does not come on.</li> </ul>
• Vertical deflection failure	4 times	004:000 or 004:001~255	<ul style="list-style-type: none"> <li>• V.OUT IC6800 faulty</li> <li>• D6816 faulty</li> <li>• D6817 faulty</li> <li>• D6824 faulty</li> <li>• R6852 open</li> <li>• R6851 open</li> </ul>	<ul style="list-style-type: none"> <li>• Vertical deflection pulse is stopped.</li> <li>• Vertical size is too small.</li> <li>• Vertical deflection stopped.</li> </ul>
• White balance failure (no PICTURE)	5 times	005:000 or 005:001~255	<ul style="list-style-type: none"> <li>• G2 is improperly adjusted. (Note 2)</li> <li>• CRT problem.</li> <li>• Video OUT IC9001, 9002, 9003 are faulty. (C board)</li> <li>• IC8306 (J board) and IC4301 (E board) are faulty.</li> <li>• No connection E board to C board.</li> </ul>	<ul style="list-style-type: none"> <li>• No raster is generated.</li> <li>• CRT cathode current detection reference pulse output is small.</li> </ul>
• Horizontal deflection failure	6 times	006:000 or 006:001~225	<ul style="list-style-type: none"> <li>• C6831 is open circuit.</li> <li>• CN6101 (D1 board) is disconnected.</li> </ul>	<ul style="list-style-type: none"> <li>• H pulse output is too high.</li> </ul>
• Audio Protection	7 times	007:000 or 007:001~225	<ul style="list-style-type: none"> <li>• Power supply fails.</li> <li>• IC1203, IC1204 faulty</li> </ul>	<ul style="list-style-type: none"> <li>• There is picture but speaker does not release sound.</li> </ul>
• Micro reset	—	101:00 or 101:001~225	<ul style="list-style-type: none"> <li>• Discharge CRT (C Board)</li> <li>• Static discharge</li> <li>• External noise</li> </ul>	<ul style="list-style-type: none"> <li>• Power is shut down shortly, after this return back to normal.</li> <li>• Detect Micro latch up.</li> </ul>

Note 1: Refer to screen (G2) Adjustment in section 4-5 of this manual.



## 2. DISPLAY OF STANDBY/TIMER LIGHT FLASH COUNT



<u>Diagnostic Item</u>	<u>Flash Count*</u>
+B overcurrent	2 times
+B overvoltage	3 times
V deflection stop	4 times
White balance failure	5 times
High voltage protector	6 times
Audio Protection	7 times

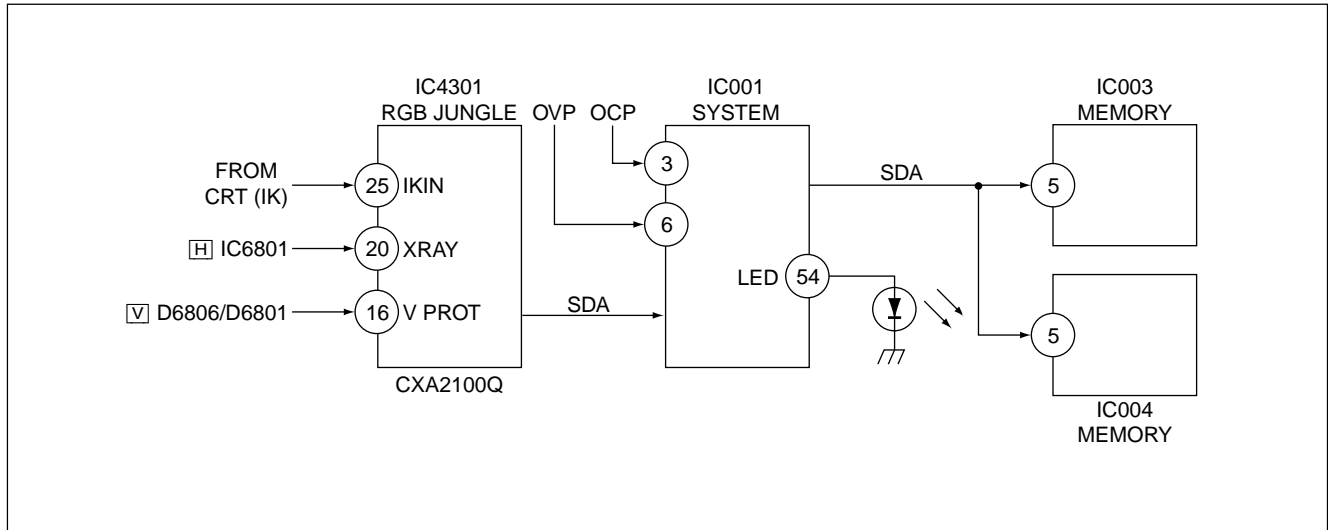
\* One flash count is not used for self-diagnostic.

## 3. STOPPING THE STANDBY/TIMER FLASH

Turn off the power switch on the TV main unit or unplug the power cord from the outlet to stop the STANDBY/TIMER lamp from flashing.



## 6. SELF-DIAGNOSTIC CIRCUIT



### **+B overcurrent (OCP)**

Occurs when an overcurrent on the +B(135) line is detected by Q6610 and Q6609.

If Q6610 and Q6609 go to ON, the voltage to the pin3 of IC001 go to UP. The unit will automatically turn off.

### **+B overvoltage (OVP)**

Occurs when an overvoltage on the +B(135) line is detected by D6635, Q6611 and Q6612. If Q6611 and Q6612 go to ON, the voltage to pin6 of IC001 go to UP. The unit will automatically turn off.

### **Vertical deflection failure**

Occurs when an absence of the vertical deflection pulse is detected by Q6811, Q6819, Q6820, Q6821 and D6801. Shut down the power supply.

### **White balance failure**

If the RGB levels do not balance or become low level within 5 seconds. This error will be detected by IC4301. TV will stay on, but there will be no picture.

### **High voltage protector of Horizontal Deflection**

Occurs when an overvoltage of horizontal pulse is detected by D6809 and IC6801.


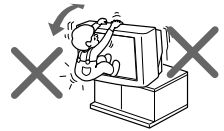
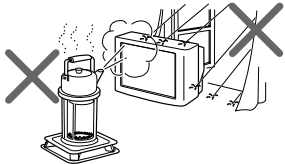
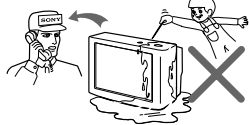
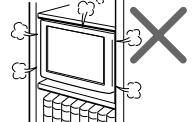
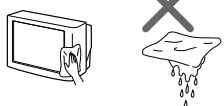

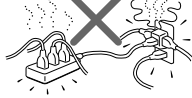
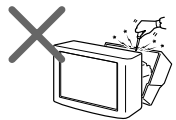
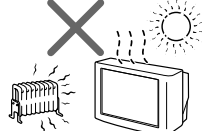
If the voltage of 7 pin of IC6801 goes to High, the voltage to pin20 of IC4301 go to UP. The unit will automatically turn off.

The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

## SECTION 1 GENERAL

### WARNING

- Dangerously high voltages are present inside the TV.
- Operate the TV only between 110 – 240 V AC.

	
<p>For your own safety, do not touch any part of the TV, the power cord and the antenna cable during lightning storms.</p>	<p>Install the TV in a stable position. Do not allow children to climb onto it.</p>
	
<p>To prevent fire or shock hazard, do not expose the TV to rain or moisture.</p>	<p>Do not operate the TV if any liquid or solid object falls into it. Have it checked immediately by qualified personnel only.</p>
	
<p>Do not install the TV in a confined space, such as a bookcase or built-in cabinet. Do not block the ventilation openings of the TV.</p>	<p>Clean the TV with a dry and soft cloth. Do not use benzene, thinner, or any other chemicals to clean the TV. Do not scratch the picture tube.</p>
	
<p>Pull the power cord out by the plug. Do not pull the power cord itself. Disconnect the TV if you are not going to use it for several days.</p>	<p>Do not plug in too many appliances to the same power socket. Do not damage the power cord.</p>
	
<p>Do not open the cabinet and the rear cover of the TV. Refer servicing to qualified personnel.</p>	<p>Do not install the TV in hot, humid or excessively dusty places.</p>

2

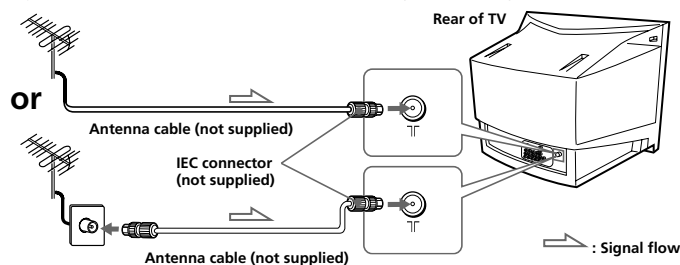
### Using Your New TV

## Getting Started


### Step 1

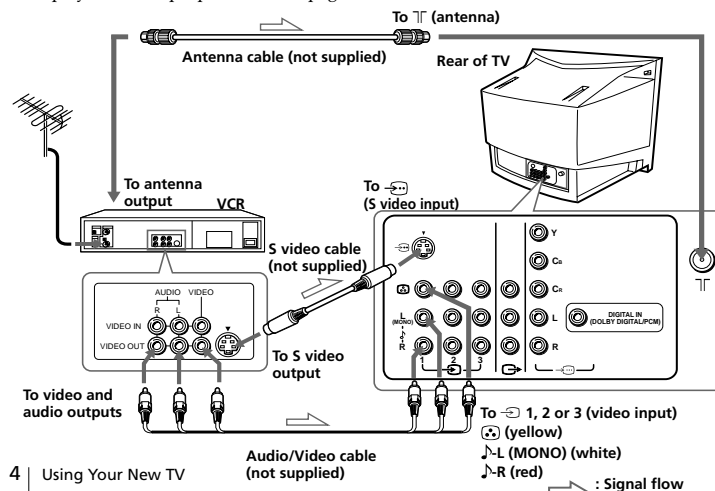
#### Connect the antenna

If you wish to connect a VCR, see the "Connecting a VCR" diagram below.



#### Connecting a VCR

To play a video tape, press  (see page 11).



4 Using Your New TV

#### Notes

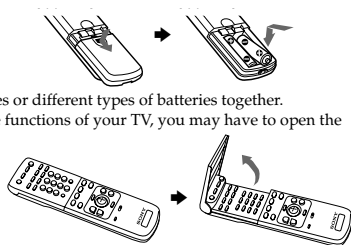
- If you connect a monaural VCR, connect the yellow plug to (the yellow jack) and the black plug to L (MONO) (the white jack).
- If you connect a VCR to the 1 (antenna) terminal, preset the signal output from the VCR to the program number 0 on the TV.
- When both the (S video input) and 1 (video input) are connected, the (S video input) is automatically selected. To view the video input to 1 (video input), disconnect the S video cable.

## Step 2

### Insert the batteries into the remote

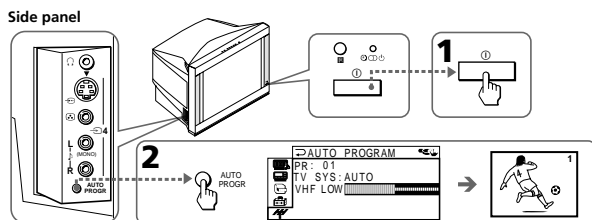
#### Notes

- Do not use old batteries or different types of batteries together.
- To operate some of the functions of your TV, you may have to open the remote control cover.



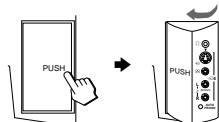
## Step 3

### Preset the channels automatically



#### Notes

- To stop the automatic channel presetting, press MENU twice.
- If your TV has preset an unwanted channel or cannot preset a particular channel, then preset your TV manually (see page 43).
- To open the side panel of your TV, push on it until you hear a click, then it will open.

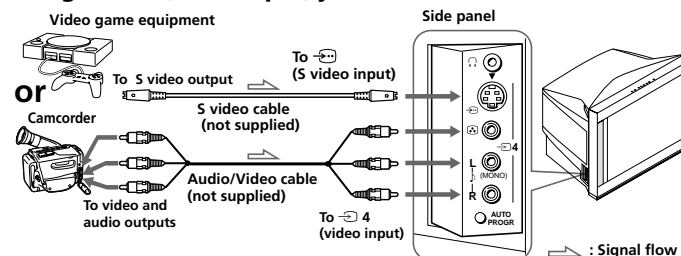


Using Your New TV | 5

## Connecting optional components

You can connect optional audio/video components, such as a VCR, multi disc player, camcorder, video game, or stereo system. To watch and operate the connected equipment, see pages 11 and 27.

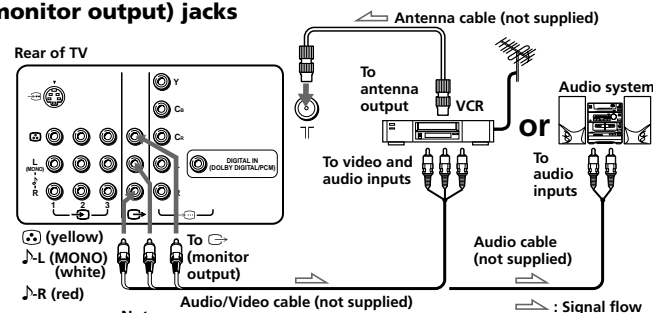
### Connecting a camcorder/video game equipment using the (video input) jacks



#### Notes

- When connecting video game equipment, display the "FEATURE" menu and select "ON" for "GAME MODE" to adjust the picture setting that is suitable for video games (see page 38).
- You can also connect video equipment to the 1, 2, or 3 (video input) jacks at the rear of your TV.
- When both the (S video input) and 4 (video input) are connected, the (S video input) is automatically selected. To view the video input to 4 (video input), disconnect the S video cable.

### Connecting audio/video equipment using the (monitor output) jacks



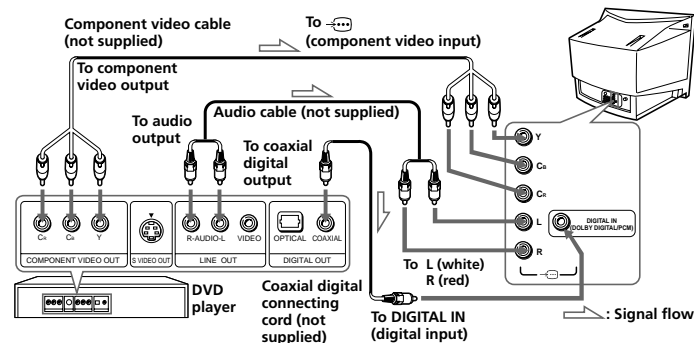
#### Note

- If you select "DVD" on your TV screen, no signal will be output at the (monitor output) jacks (see page 11).

6 | Using Your New TV

## Connecting a DVD player to (component video input)

- 1 Using an audio cable, connect R and L under (component video input) on your TV to the LINE OUT, AUDIO R and L output connectors on your DVD player.
- 2 Using a coaxial digital connecting cord, connect DIGITAL IN under (component video input) on your TV to the DIGITAL OUT, COAXIAL output connector on your DVD player.
- 3 Using a component video cable, connect Y, C<sub>B</sub>, and C<sub>R</sub> under (component video input) on your TV to the COMPONENT VIDEO OUT Y, C<sub>B</sub>, and C<sub>R</sub> output connectors on your DVD player.
- 4 Press on the remote or the TV until "DVD" appears on the screen.



### Notes

- Some DVD player terminals may be labeled differently:

Connect	To (on the DVD player)
Y (green)	Y
C <sub>B</sub> (blue)	C <sub>B</sub> , B-Y or P <sub>B</sub>
C <sub>R</sub> (red)	C <sub>R</sub> , R-Y or P <sub>R</sub>

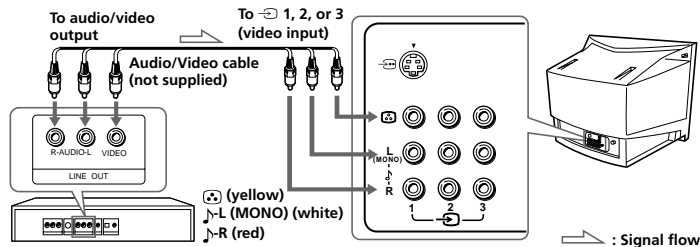
- When connecting to (component video input) on your TV, you must connect Y, C<sub>B</sub>, and C<sub>R</sub> to receive the video signals, and at least connect DIGITAL IN to receive digital audio signals or connect L and R to receive analog audio signals (see page 34).
- When making connections to DIGITAL IN under (component video input) on your TV, always set "DIGITAL IN: OFF" in the "A/V CONTROL" menu. After completing all connections, then set "DIGITAL IN: ON". If you set "DIGITAL IN: ON" while still making connections to DIGITAL IN (component video input), a loud noise may suddenly come out from the speakers, affecting your hearing and causing damage to the speakers (see page 34).

continued

## Connecting optional components (continued)

### Connecting a DVD player to (video input)

Connect 1, 2, or 3 (video input) (audio/video) connectors on your TV to LINE OUT on your DVD player.



### Notes

- Since the high quality pictures on a DVD disc contain a lot of information, picture noise may appear. In this case, adjust the sharpness ("SHARP") under "PERSONAL ADJUST" in the "PICTURE MODE" menu (see page 33).
- Connect your DVD player directly to your TV. Connecting the DVD player through other video equipment will cause unwanted picture noise.

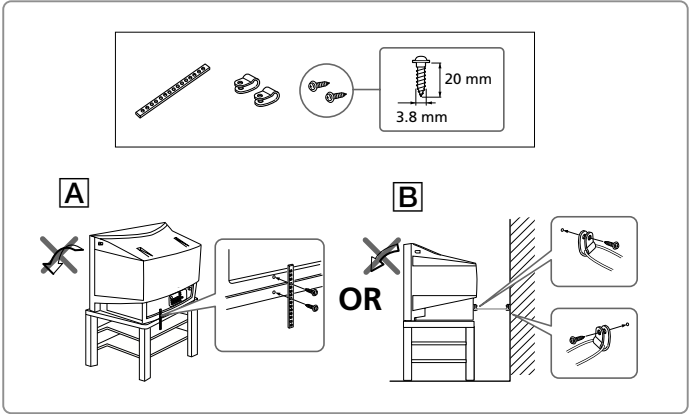
# Securing the TV

To prevent the TV from falling, secure the TV using one of the following methods:

**A** With the supplied screws, attach the stabilizer band to the TV stand and to the rear of the TV using the provided hole.

OR

**B** Pass a cord or chain through the clamps and secure them to the rear of the TV and a wall or pillar.

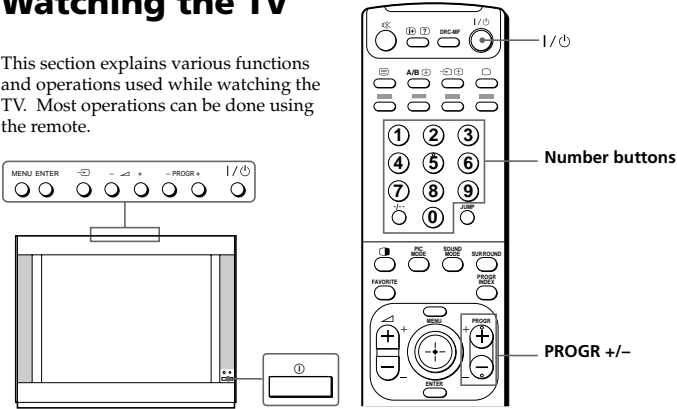


**Note**


- Use only the supplied screws. Use of other screws may damage the TV.

# Watching the TV

This section explains various functions and operations used while watching the TV. Most operations can be done using the remote.



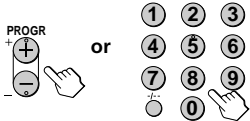
## 1 Press 1 to turn on the TV.

When the TV is in standby mode (the  indicator on the TV is lit red), press I/O on the remote or on the TV.



## 2 Press PROG +/- or the number buttons to select the TV channel.

For double digit numbers, press +/-, then the number (e.g., for 25, press +/-, then 2 and 5).



**Note**

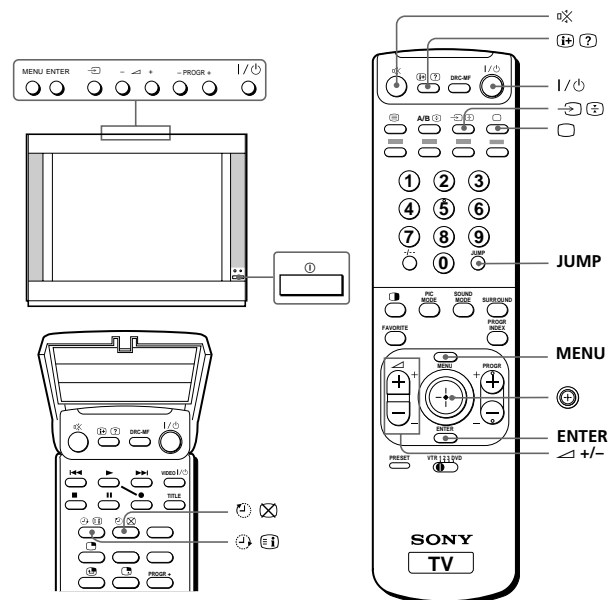
- When you turn on the TV, either the program number or video mode is displayed for approximately 40 seconds. The ECO MODE (ECO) icon will also appear if "ECO MODE" in the "FEATURE" menu is set "ON" (see page 38).

## To select a TV program quickly

- (1) Press and hold PROG +/-.
- (2) Release PROG +/- when the desired program number appears.

**Note**

- When you select a TV program quickly, the picture may be disrupted. This does not indicate a malfunction.



### Additional tasks

To	Press
Turn off temporarily	I/O. The I/O indicator on the TV lights up red.
Turn off completely	⏻ on the TV.
Adjust the volume	⏮/⏭.
Mute the sound	🔇.
Watch the video input (VCR, camcorder, etc.)	📺 (or 📺 on the TV) to select "VIDEO 1", "VIDEO 2", "VIDEO 3", "VIDEO 4" or "DVD". To return to the TV screen, press □ (or 📺 on the TV).
Jump back to the previous channel	JUMP.
Display the on-screen information*	ℹ.

\* Some picture/sound settings, and either the program number or video mode are displayed. The on-screen display for the picture/sound settings disappears after about 3 seconds.

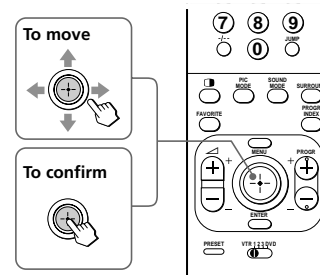
continued

### Watching the TV (continued)

#### Using the Remote Control Button Joystick (⬆)

You can select the menu item on the screen by moving ⬆ up, down, left or right (see page 31).

To confirm a selected item, press ⬆.  
You can also press ENTER on the remote to confirm a selected item.



#### (KV-ES34M61/ES34M90)

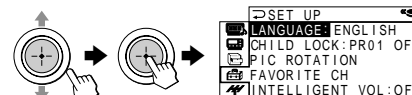
#### Changing the menu language

You can change the menu language as well as the on-screen language. For details on how to use the menu, see "Introducing the menu system" on page 29.

#### 1 Press MENU.



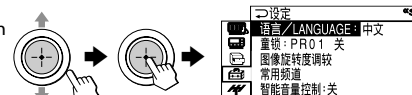
#### 2 Move ⬆ up or down to select 📺, then press ⬆.



#### 3 Make sure "LANGUAGE" is selected then press ⬆.



#### 4 Move ⬆ up or down to select the desired language (e.g., 中文), then press ⬆.



#### To return to the normal screen

Press MENU.

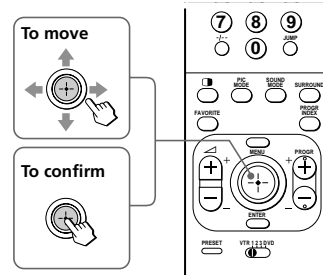


## Watching the TV (continued)

### Using the Remote Control Button Joystick ( )

You can select the menu item on the screen by moving **⬆** up, down, left or right (see page 31).

To confirm a selected item, press **⬆**. You can also press ENTER on the remote to confirm a selected item.

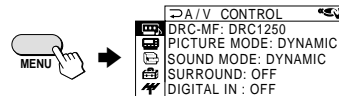


(KV-ES34M31/ES34M80)

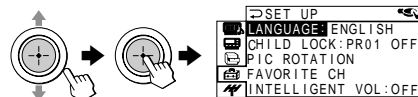
### Changing the menu language

You can change the menu language as well as the on-screen language. For details on how to use the menu, see "Introducing the menu system" on page 29.

**1** Press MENU.



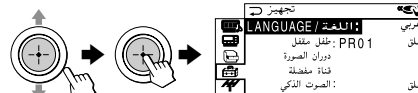
**2** Move **⬆** up or down to select **SET UP**, then press **⬆**.



**3** Make sure "LANGUAGE" is selected then press **⬆**.



**4** Move **⬆** up or down to select the desired language (e.g., عربي), then press **⬆**.  
The selected menu language appears.

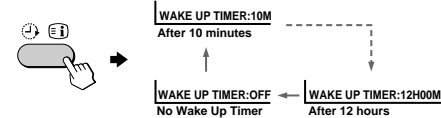


### To return to the normal screen

Press MENU.

## Setting the Wake Up timer

**1** Press **⌚** until the desired period of time appears.  
The Wake Up timer starts immediately after you have set it.



**2** Select the TV channel or video mode you want to wake up to.

**3** Press **⏻**, or set the Sleep timer if you want the TV to turn off automatically. The **⌚** indicator on the TV lights up orange.

### To cancel the Wake Up timer

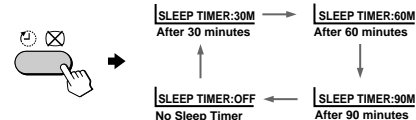
Press **⌚** until "WAKE UP TIMER: OFF" appears, or turn off the TV's main power.

#### Note

- If no buttons or controls are pressed for more than two hours after the TV is turned on using the Wake Up timer, the TV automatically goes into standby mode. To resume watching the TV, press any button or control on the TV or the remote.

## Setting the Sleep timer

Press **⌚** until the desired period of time appears.  
The Sleep timer starts immediately after you have set it.



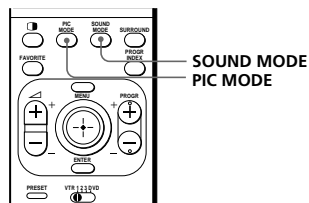
### To cancel the Sleep timer

Press **⌚** until "SLEEP TIMER: OFF" appears, or turn the TV off.

## Advanced Operations

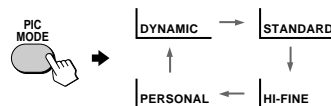
### Selecting the picture and sound modes

You can select picture and sound modes and adjust the setting to your preference in the "PERSONAL" option.



#### Selecting the picture mode

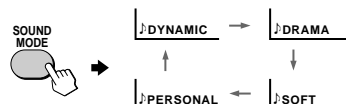
Press PIC MODE repeatedly until the desired picture mode is selected.



Select	To
"DYNAMIC"	receive high contrast pictures.
"STANDARD"	receive normal pictures.
"HI-FINE"	receive higher resolution pictures with mild contrast.
"PERSONAL"	receive the last adjusted picture setting from the "ADJUST" option in the "A/V CONTROL" menu (see page 33).

#### Selecting the sound mode

Press SOUND MODE repeatedly until the desired sound mode is selected.



Select	To
"DYNAMIC"	listen to dynamic and clear sound that emphasizes both the low and high tones.
"DRAMA"	listen to sound that emphasizes voice and high tones.
"SOFT"	receive soft sound.
"PERSONAL"	receive the last adjusted sound setting from the "ADJUST" option in the "A/V CONTROL" menu (see page 33).

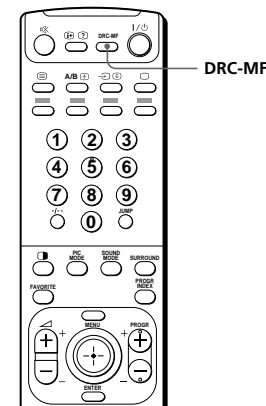
#### Tip

- You can also set the picture and sound modes using the menu (see "Changing the "A/V CONTROL" setting" on page 32).

### Viewing higher quality pictures

#### — "DRC-MF"

The Digital Reality Creation-Multi Function (DRC-MF) feature allows you to enjoy higher quality pictures on your TV. You can select "DRC1250" to watch super real (higher resolution) pictures, or "DRC100" to reduce flicker if necessary.



Press DRC-MF repeatedly until you receive the desired picture quality.




Select	To
"DRC1250"	select higher resolution pictures.
"DRC100"	reduce flicker on the screen.

#### Tip

- When the broadcast signal is weak, you may see some dots or noise on the TV screen. To reduce this interference, display the "A/V CONTROL" menu and select "ADJUST" in "PICTURE MODE", then adjust "SHARP" to reduce the sharpness (see page 33).

#### Note

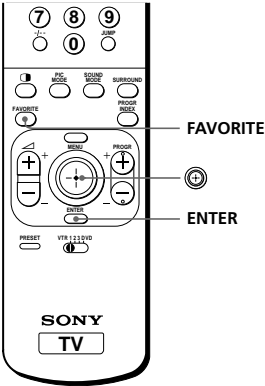
- The DRC-MF mode is not selectable when using the "PROGRAM INDEX" or "FAVORITE" channel feature, or when the "GAME MODE", Picture-In-Picture ("PIP"), or "TWIN" mode is turned "ON".

The DRC-MF logo (  ) and "DRC-MF" are trademarks of Sony Corporation.

# Viewing your favorite channels — “FAVORITE CH”

You can display seven favorite channels for quick and easy selection.

The last seven channels selected with the number buttons are displayed in “AUTO” mode. You can set up your own favorite channels in “MANUAL” mode under the “FAVORITE CH” menu (see “Changing the favorite channel setting” on page 41).



## Selecting a favorite channel

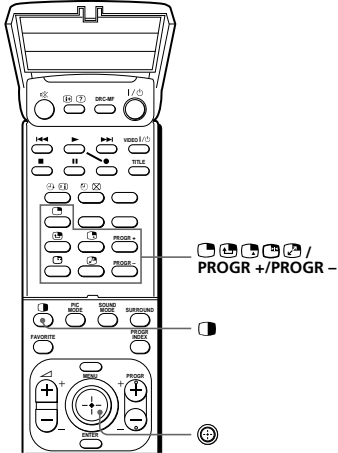
- 1 Press FAVORITE.
- 2 Move up, down, left or right to select the desired channel (e.g. PR 8), then press .
- 3 Press again.

**Note**

- When you use your TV for the first time, seven preset channels appear.

# Watching two programs at the same time — “PIP”, “TWIN”

With the Picture-in-Picture (PIP) or TWIN pictures features, you can display a different TV program or video within or beside the main picture.



## Displaying the PIP screen

- Press .
- 

## Displaying TWIN pictures

- Press .
- 

## To return to the normal screen






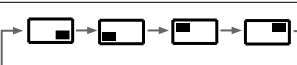




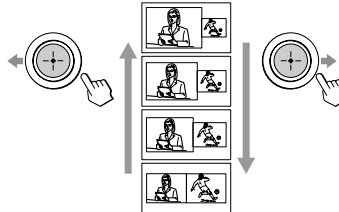
Press (when in the PIP screen) or (when in the TWIN picture screen).

**Tip**




- You can also display the PIP screen or TWIN pictures using the menu (see “Changing the MULTI PICTURE setting” on page 35).

continued

**Watching two programs at the same time (continued)****Additional PIP/TWIN pictures tasks**

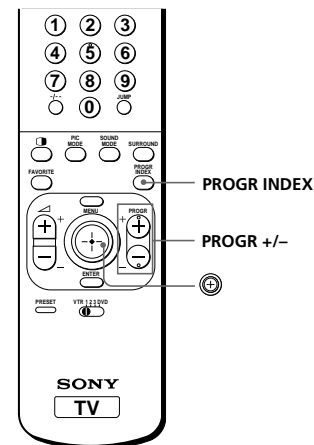
To	Press/Move
change a TV program in the PIP screen or in the right TWIN picture	Press PROGR + or PROGR -. For a video input, press  .
swap pictures between the main and PIP screens	Press  . 
freeze the PIP screen	Press  . To unfreeze the screen, press the button again.
change the position of the PIP screen	Press  . 
swap the right and left pictures of the TWIN pictures	Press  . 
change the screen size of the TWIN pictures	Move  left to increase the left screen size. Move  right to increase the right screen size. 

**Notes**

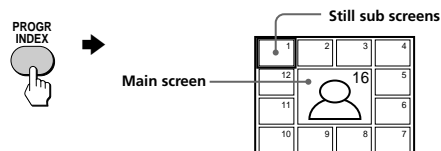
- The  button does not function in the TWIN pictures mode.
- When you display a video input on the PIP screen at a faster/slower speed, the picture may be disrupted depending on the VCR type.
- If you display different color systems on the main screen and the PIP screen, the size of the PIP screen may be different and the PIP picture may be disrupted. This does not indicate a malfunction of the TV.
- In the TWIN picture screen, you can only operate and hear the sound of the main left screen (  appears on the screen).
- When the  button is pressed, the TV screen flickers or goes blank for about one second before the TWIN pictures appear. This does not indicate a malfunction of the TV.

**Displaying multiple programs****— “PROGRAM INDEX”**

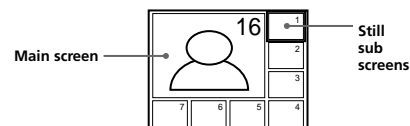
The PROGRAM INDEX feature displays all of the preset TV programs on twelve or seven sub screens for direct selection.

**Press PROGR INDEX.**

The first twelve preset programs appear one by one, clockwise from the upper left corner.



When the number of the preset TV programs is less than eight, the first seven preset programs appear one by one, clockwise from the upper right corner.

**Tip**

- When you press the PROGR INDEX button in the TWIN pictures mode, the left picture appears as the main screen of the PROGRAM INDEX mode.

**continued**

## Displaying multiple programs (continued)

### To view the next or the previous twelve preset programs

This works only when the number of the preset TV programs is more than twelve.

Press **PROGR +/-** on the remote or the TV.

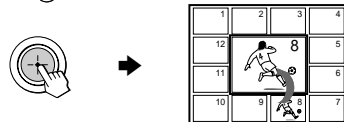


### To select the desired program directly from the sub screens

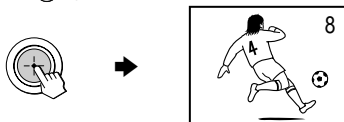
1 Move **⬆** up, down, left or right to move the frame to the screen of the program you want to watch.



2 Press **⊕**.



3 Press **⊕** again.



#### Tip

- Pressing the number buttons directly displays the program.

### To return to the normal screen

Press **PROGR INDEX** again, or:

- 1 Select **"PROGRAM INDEX"** from the **"MULTI PICTURE"** menu.
- 2 Press **⊕**.

#### Tip

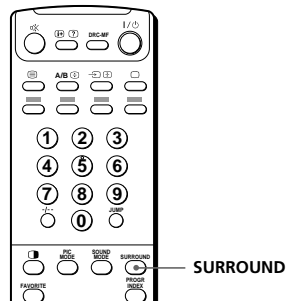
- You can also display multiple programs using the menu (see **"Changing the MULTI PICTURE setting"** on page 35).

#### Note

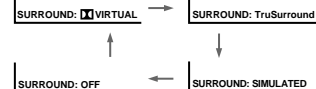
- When displaying multiple programs, only the sound of the main screen is heard.

## Listening with surround sound

The surround feature enables you to enjoy the sound effects of a concert hall or movie theater.



Press SURROUND repeatedly until you receive the desired surround sound.



Select	To
"VIRTUAL"	listen to Dolby* Surround encoded sound.
"TruSurround"	listen to the surround sound that spreads out to the rear of a room.
"SIMULATED"	listen to monaural sound with a stereo-like effect.
"OFF"	turn off the surround sound.

### Notes

- The Virtual Dolby Surround of this model consists of Dolby Digital, Dolby Pro Logic and TruSurround.
- The "VIRTUAL" (Virtual Dolby Digital) is only available when receiving a Dolby Digital signal through the "DIGITAL IN" (component video input) jack at the rear of your TV and "DIGITAL IN: ON" in the "A/V CONTROL" menu is selected (see pages 7 and 32).
- When using the "DIGITAL IN" (component video input) jack at the rear of your TV, the available surround modes depend on the type of digital signal being received.
- SIMULATED uses SRS (MONO).

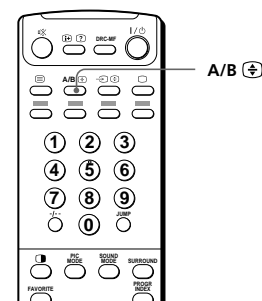
\* Manufactured under license from Dolby Laboratories Licensing Corporation. DOLBY, the double-D symbol and "PRO LOGIC" are trademarks of Dolby Laboratories Licensing Corporation.

"TruSurround" is a trademark of SRS Labs, Inc. SRS and the SRS symbol are registered trademarks of SRS Labs, Inc. in the United States and selected foreign countries. SRS and TruSurround are incorporated under license from SRS Labs, Inc. and are protected under United States Patent Nos. 4,748,669 and 4,841,572 with numerous additional issued and pending foreign patents".

## Enjoying stereo or bilingual programs

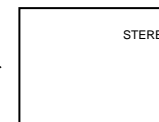
(Except KV-ES34M80)

You can enjoy stereo sound or bilingual programs of NICAM and A2 (German) stereo systems.



Press A/B repeatedly until you receive the sound you want.

The on-screen display changes to show the selected sound and the indicator on the TV lights up red.



### When receiving a NICAM program

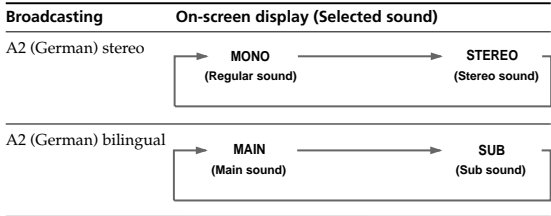
Broadcasting	On-screen display (Selected sound)
NICAM stereo	
NICAM bilingual	
NICAM monaural	

continued

(KV-ES34M31/ES34M61 only)

Enjoying stereo or bilingual programs (continued)

When receiving an A2 (German) program



- Notes
- If the signal is very weak, the sound becomes monaural automatically.
  - If the stereo sound is noisy when receiving a NICAM program, select "MONO". The sound becomes monaural, but the noise is reduced.

If the sound is distorted or noisy when receiving a monaural program through the ㄿ (antenna) terminal

Press A/B repeatedly until "MONO" appears on the screen.  
To cancel the monaural sound setting, press A/B again until "AUTO" appears on the screen.

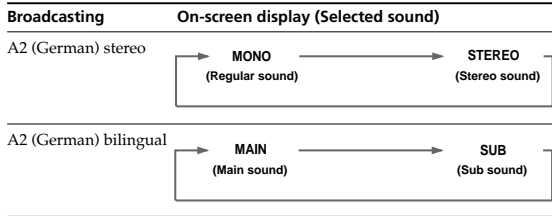


- Notes
- The "MONO" or "AUTO" setting is memorized for each program position.
  - You cannot receive a stereo broadcast signal when the TV is in the "MONO" setting. Normally, set the TV to "AUTO".

(KV-ES34M90 only)

Enjoying stereo or bilingual programs (continued)

When receiving an A2 (German) program



Receiving area for NICAM and A2 (German) programs

System	Receiving area
NICAM	Hong Kong, Singapore, New Zealand, Malaysia, Thailand, etc.
A2 (German)	Australia, Malaysia, Thailand, etc.

- Notes
- If the signal is very weak, the sound becomes monaural automatically.
  - If the stereo sound is noisy when receiving a NICAM program, select "MONO". The sound becomes monaural, but the noise is reduced.
  - Before receiving a NICAM stereo program in China, please check the NICAM broadcast condition at your area. When receiving a NICAM stereo program, the receiving conditions might vary depending on area. In addition, different strength of the NICAM broadcast signal might affect the receiving quality.

If the sound is distorted or noisy when receiving a monaural program through the ㄿ (antenna) terminal

Press A/B repeatedly until "MONO" appears on the screen.  
To cancel the monaural sound setting, press A/B again until "AUTO" appears on the screen.

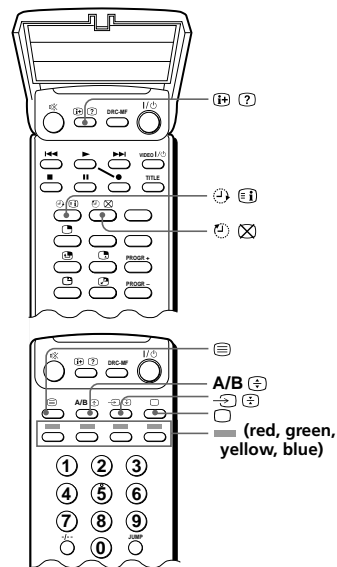


- Notes
- The "MONO" or "AUTO" setting is memorized for each program position.
  - You cannot receive a stereo broadcast signal when the TV is in the "MONO" setting. Normally, set the TV to "AUTO".

## Viewing Teletext

(KV-ES34M31/ES34M61 only)

Some TV stations broadcast an information service called Teletext which allows you to receive various information, such as stock market reports and news.

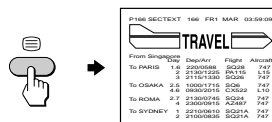


### Displaying Teletext

**1** Select a TV channel that carries the Teletext broadcast you want to watch.

**2** Press to display the text.

A Teletext page (normally the index page) is displayed. If there is no Teletext broadcast, "100?" is displayed at the top left corner of the screen after approximately 10 seconds.



### To turn off Teletext

Press .

### Viewing Teletext (continued)

#### Additional Teletext tasks

To	Do this
display a Teletext page on the TV picture	Press . Each time you press , the screen changes as follows: Teletext → Teletext and TV → TV.
check the contents of a Teletext service	Press . An overview of the Teletext contents, including page numbers, appears on the screen.
select a Teletext page	Press the number buttons to enter the three-digit page number of the desired Teletext page.* If you make a mistake, reenter the correct page number. To access the next or previous page, press <b>PROGR +/-</b> .
hold (pause) a Teletext page (stop the page from scrolling)	Press  to display the symbol "⏸" at the top left corner of the screen. To resume normal Teletext viewing, press  or .
reveal concealed information (e.g., an answer to a quiz)	Press . To conceal the information, press the button again.
enlarge the Teletext display	Press . Each time you press , the Teletext display changes as follows: Enlarge upper half → Enlarge lower half → Normal size.
stand by for a Teletext page while watching a TV program	1 Enter the Teletext page number that you want to refer to, then press . 2 When the page number is displayed, press  to show the text.

\* You can also select a Teletext page of any page number that appears in the colored column at the bottom of the screen using the corresponding color-coded button on the remote.

### Using FASTEXT

This feature allows you to quickly access a Teletext page that uses FASTEXT. When a FASTEXT program is broadcast, colored menus appear at the bottom of the screen. The color of each menu corresponds to the color-coded buttons on the remote (red , green , yellow , and blue ).

#### To access a FASTEXT menu

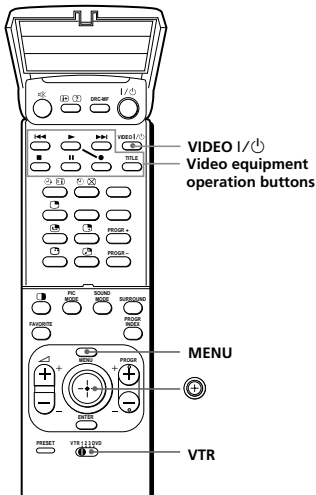
Press the color-coded button on the remote corresponding to the menu you want. The menu page appears on the screen after a few seconds.

continued



Operating optional components

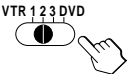
You can use the supplied remote to operate Sony video equipment such as Beta, 8 mm, VHS or DVD.



Setting up the remote to work with other connected equipment

Switch VTR to select the desired equipment type (see the chart below).

For example, to operate a Sony 8 mm VCR:



To control	Select
DVD	DVD
VTR1 (Beta)	1
VTR2 (8 mm)	2
VTR3 (VHS)	3

- Notes
- If your video equipment is furnished with a COMMAND MODE selector, set this selector to the same position as the VTR switch.
  - If the equipment does not have a certain function, the corresponding button on the remote will not operate.

continued

Operating optional components (continued)

Operating a VCR using the remote

To	Press
turn on/off	VIDEO I / ⏻
record	▶ while pressing ●.
play	▶
stop	■
fast forward (▶▶)	▶▶
rewind the tape (◀◀)	◀◀
pause	⏸ Press again to resume normal playback.
search the picture forward (▶▶) or backward (◀◀)	▶▶ or ◀◀ during playback. Release to resume normal playback.

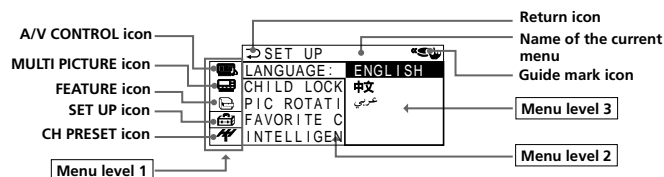
Operating a DVD player using the remote




To	Press
turn on/off	VIDEO I / ⏻
play	▶
stop	■
pause	⏸ Press again to resume normal playback.
step through different tracks of an audio disc	▶▶ to step forward or ◀◀ to step backward.
display the title menu	TITLE
display the menu	MENU while holding down ●.
select the menu item	Move ⏶ up, down, left or right while holding down ●.

## Adjusting Your Setup (MENU)

### Introducing the menu system



The MENU button lets you open a menu and change the settings of your TV. The following is an overview of the menu system.



Level 1	Level 2	Level 3/Function
"A/V CONTROL" 	"DRC-MF"	Select the "DRC-MF" mode: "DRC1250" → "DRC100"
	"PICTURE MODE"	Select the picture mode: "DYNAMIC" → "STANDARD" → "HI-FINE" → "PERSONAL" → "ADJUST"
	"ADJUST"	Adjust the "PERSONAL" option: "PICTURE" → "COLOR" → "BRIGHT" → "HUE" → "SHARP"
	"SOUND MODE"	Select the sound mode: "DYNAMIC" → "DRAMA" → "SOFT" → "PERSONAL" → "ADJUST"
	"ADJUST"	Adjust the "PERSONAL" option: "BASS" → "TREBLE" → "BALANCE" → "BBE"*
	"SURROUND"	Select the "SURROUND" mode: "DUAL VIRTUAL" → "TruSurround" → "SIMULATED" → "OFF"
	"DIGITAL IN"	Activate or deactivate the digital audio input jack at the rear of your TV.
"MULTI PICTURE" 	"PIP"	Activate or deactivate the PIP feature.
	"PIP POSITION"	Change the position of the sub screen.
	"SWAP"	Swap the pictures between the main and sub screens.
	"TWIN"	Display a TV program or video beside the main screen.
"FEATURE" 	"PROGRAM INDEX"	Display all the preset TV programs at the same time.
	"WIDE MODE"	Activate or deactivate WIDE MODE feature.
	"ECO MODE"	Activate or deactivate ECO MODE feature.
	"GAME MODE"	Activate or deactivate GAME MODE feature.

Adjusting Your Setup (MENU)

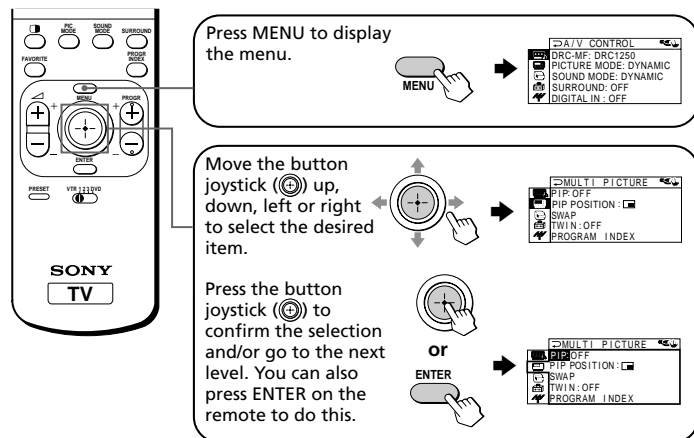
### Introducing the menu system (continued)

Level 1	Level 2	Level 3/Function
"SET UP" 	"LANGUAGE"	Change the menu language: "ENGLISH" → "中文" (Chinese) → "عربي" (Arabic)
	"CHILD LOCK"	Lock out specific channels.
	"PIC ROTATION"	Rotate the picture.
	"FAVORITE CH"	Set favorite channels.
	"INTELLIGENT VOL"	Adjust the volume automatically.
"CH PRESET" 	"AUTO PROGRAM"	Preset channels automatically.
	"MANUAL PROGRAM"	Preset channels manually.
	"SKIP"	Skip unwanted or unused program numbers.
	"TV SYS"	Select the TV system: "B/G" → "I" → "D/K" → "M"
	"COL SYS"	Select the color system: "AUTO" → "PAL" → "SECAM" → "NTSC3.58" → "NTSC4.43"

\* The BBE is manufactured by Sony Corporation under license from BBE Sound, Inc. It is covered by U.S. Patent No. 4,638,258 and No. 4,482,866. The word "BBE" and the BBE symbol are the trademarks of BBE Sound, Inc.

continued

## How to use the menu



## Other menu operations

To	Press/Move
Adjust the setting value	Move ⬆️⬇️⬇️⬆️ up, down, left or right.
Move to the next/previous menu level	Move ⬆️⬇️⬇️⬆️ left or right.
Cancel the menu	Press MENU.

### Tips

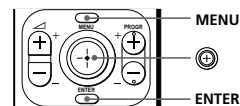
- If you want to exit from Menu level 2 to Menu level 1, move ⬆️⬇️⬇️⬆️ up or down until the return icon (⏮️) is highlighted, then press ⬆️⬇️⬇️⬆️ or ENTER.
- The MENU, ENTER, and ⬆️⬇️⬇️⬆️ +/- buttons on the TV can also be used for the operations above.

### Note

- If more than 60 seconds elapse between entries, the menu screen automatically disappears.

## Changing the "A/V CONTROL" setting

The "A/V CONTROL" menu allows you to adjust the picture and sound settings.



- Press MENU.
- Move ⬆️⬇️⬇️⬆️ up or down to select **A/V CONTROL**, then press ⬆️⬇️⬇️⬆️.
- Move ⬆️⬇️⬇️⬆️ up or down to select either "DRC-MF", "PICTURE MODE", "SOUND MODE", "SURROUND", or "DIGITAL IN", then press ⬆️⬇️⬇️⬆️.
- Move ⬆️⬇️⬇️⬆️ up or down to select the desired option, then press ⬆️⬇️⬇️⬆️.

For	Select
"DRC-MF"	either "DRC1250" or "DRC100".
"PICTURE MODE"	either "DYNAMIC", "STANDARD", "HI-FINE", "PERSONAL"*, or "ADJUST".
"SOUND MODE"	either "DYNAMIC", "DRAMA", "SOFT", "PERSONAL"*, or "ADJUST".
"SURROUND"	either "VIRTUAL", "TruSurround", "SIMULATED", or "OFF".
"DIGITAL IN"	either "ON" or "OFF".

\* When the "PERSONAL" mode is selected, the last adjusted picture/sound settings from the "ADJUST" option are received (see page 33).






### Tip

- For details on the options under the "DRC-MF", "PICTURE MODE"/"SOUND MODE", "SURROUND" and "DIGITAL IN" modes, see pages 15, 14, 22 and 34 respectively.





## To return to the normal screen

Press MENU.

### Adjusting the "ADJUST" options under "PICTURE MODE"





- Move  up or down to select the desired item (e.g., "COLOR"), then press .
  - Adjust the value according to the following table, then press .
- | For       | Move  down or left to | Move  up or right to |
|-----------|--|---|
| "PICTURE" | decrease picture contrast  | increase picture contrast   |
| "COLOR"   | decrease color intensity   | increase color intensity  |
| "BRIGHT"  | darken the picture   | brighten the picture  |
| "HUE"*    | increase red picture tones   | increase green picture tones  |
| "SHARP"   | soften the picture   | sharpen the picture   |
- \* You can adjust "HUE" for the NTSC color system only.
- Repeat the above steps to adjust other items.  
The adjusted settings will be received when you select "PERSONAL".

### Adjusting the "ADJUST" options under "SOUND MODE"


- Move  up or down to select the desired item (e.g., "BALANCE"), then press .
  - Adjust the value according to the following table, then press .
- | For       | Move                 |
|-----------|---|
| "BASS"    | down or left to decrease the bass, up or right to increase the bass.                                    |
| "TREBLE"  | down or left to decrease the treble, up or right to increase the treble.                                |
| "BALANCE" | down or left to increase the left speaker's volume, up or right to increase the right speaker's volume. |
| "BBE"     | up or down to select "HIGH", "LOW", or "OFF".<br>"BBE" can produce clear sound.                         |
- Repeat the above steps to adjust other items.  
The adjusted settings will be received when you select "PERSONAL".

### Changing the "A/V CONTROL" setting (continued)

#### Setting the "DIGITAL IN" options

- In the "DIGITAL IN" menu, move  up or down to select the desired option (see table below).
- | Select | To  |
|--------|---|
| "ON"   | receive digital audio signal through  DIGITAL IN (component video input) jack. |
| "OFF"  | receive analog audio signal through  L and R (component video input) jack.     |
- Press  to confirm the selected option.

#### Note

- Your TV can only receive Dolby Digital or Linear PCM format digital signals through the  DIGITAL IN (component video input) jack (see page 7). Receiving any other format digital signal may cause unwanted noise or no sound from the speakers.

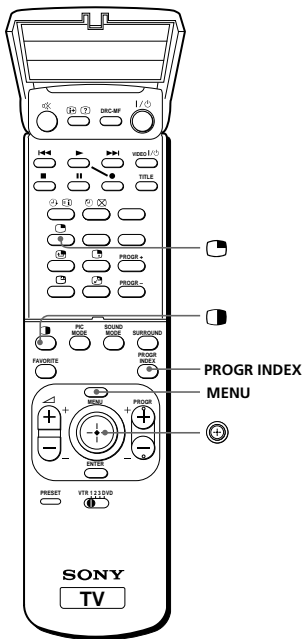
#### Tip

- For details on the menu system and how to use the menu, refer to "Introducing the menu system" on page 29.

continued

Changing the "MULTI PICTURE" setting

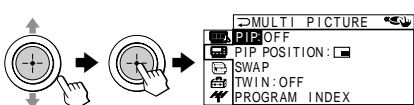
The "MULTI PICTURE" menu allows you to use the Picture-in-Picture (PIP), TWIN pictures, or PROGRAM INDEX features.



1 Press MENU.

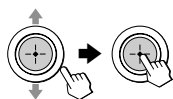


2 Move the directional pad up or down to select PIP, then press the center button.



Changing the "MULTI PICTURE" setting (continued)

3 Move the directional pad up or down to select the desired option (see the table below), then press the center button.



Select	To
"PIP"	display the PIP screen within the main picture. Move the directional pad up or down to select "ON", then press the center button. To cancel, press the PIP button or select "OFF", then press the center button.
"PIP POSITION"	change the position of the PIP screen. Move the directional pad up or down to select the desired position, then press the center button.
"SWAP"	swap the main and PIP screens, or right and left pictures of the TWIN pictures.
"TWIN"	display a different TV program or video beside the main picture. Move the directional pad up or down to select "ON", then press the center button. To cancel, press the TWIN button or select "OFF", then press the center button.
"PROGRAM INDEX"	view multiple programs on the sub-screens. To cancel, press the PROGRAM INDEX button.

To return to the normal screen

Press MENU.

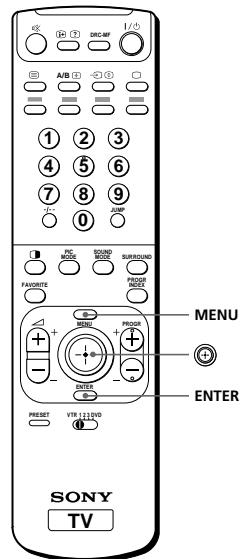
Tip

- For details on the menu system and how to use the menu, see "Introducing the menu system" on page 29.

continued

## Changing the "FEATURE" setting

The "FEATURE" menu allows you to change the size of the picture on the screen when receiving wide mode (16:9) picture signals. You can also adjust the picture setting that is suitable for viewing video games, and reduce the power consumption of your TV.



### 1 Press MENU.

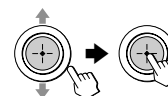


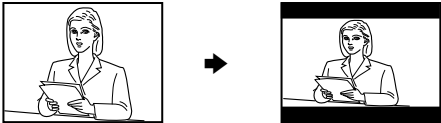
### 2 Move up or down to select , then press .



## Changing the "FEATURE" setting (continued)

### 3 Move up or down to select the desired option (see the table below), then press .



Select	To
"WIDE MODE"	change the size of the picture when receiving wide-mode (16:9) picture signal.  Move  up or down to select "ON", then press .
	
	To restore the normal picture size, select "OFF" then press .
"ECO MODE"	reduce power consumption of your TV to save energy.  Move  up or down to select "ON", then press . To cancel, select "OFF", then press .
"GAME MODE"	adjust the picture setting that is suitable to view video games.  Move  up or down to select "ON", then press . To cancel, select "OFF", then press .

#### Notes

- When you turn on "ECO MODE", the picture may become dimmer. Turning "ECO MODE" off will restore the picture to its original setting.
- "WIDE MODE" and "GAME MODE" is available only when receiving signals through the (video input), (S video input), or (component video input) jacks at the side and rear of your TV.
- If "ECO MODE" is on, the ECO MODE icon will appear at the bottom right corner of the screen when you turn on the TV or when you press on the remote (see pages 10 and 11).

### To return to the normal screen

Press MENU.

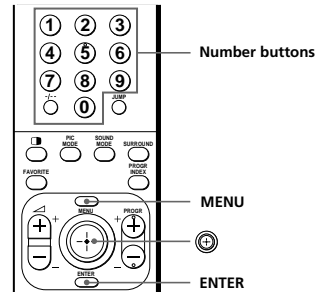
#### Tip

- For details on the menu system and how to use the menu, see "Introducing the menu system" on page 29.

continued

## Changing the "SET UP" setting

The "SET UP" menu allows you to: change the menu language, block channels, adjust the picture position, program your favorite channels, and adjust the volume automatically.



- 1 Press MENU.



- 2 Move up or down to select , then press .



- 3 Move up or down to select the desired option, then press .



Select	To
"LANGUAGE"	change the menu language (see page 12).
"CHILD LOCK"	block channels (see page 40).
"PIC ROTATION"	adjust the picture position when it is not aligned with the TV screen. Move  up or right to adjust the position clockwise, then press .Move  down or left to adjust the position counter clockwise, then press .
"FAVORITE CH"	select your favorite channels (see pages 16 and 41).
"INTELLIGENT VOL."	adjust the volume of all TV program automatically. Move  up or down to select "ON", then press .To cancel, select "OFF", then press .

### To return to the normal screen

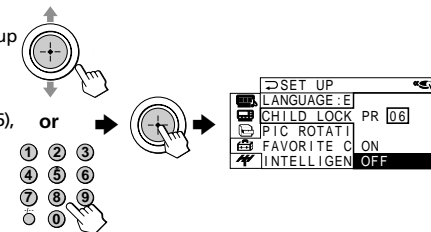
Press MENU.

Adjusting Your Setup (MENU) 39

## Changing the "SET UP" setting (continued)

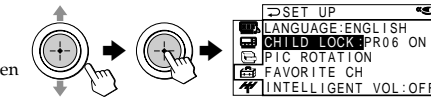
### Blocking channels ("CHILD LOCK")

- 1 After selecting "CHILD LOCK", either move up or down, or press the number buttons (or PROGR +/-) to select the desired channel (e.g. PR 06), then press .



- 2 Move up or down to select "ON", then press .

To unlock the channel, select "OFF".



The lock symbol () appears on the screen when "ON" is selected.



- 3 Repeat steps 1 and 2 to lock other channels.

### To return to the normal screen






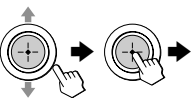



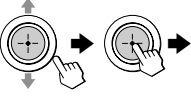
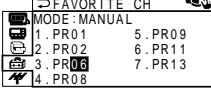
Press MENU.

#### Note

- If you preset a locked channel, that channel will be unlocked (see page 42).

40 Adjusting Your Setup (MENU)

## Changing the favorite channel setting

- After selecting "FAVORITE CH", make sure "MODE" is selected, then press .

- Move  up or down to select "MANUAL", then press .

- Move  up or down to select the program you want to change, then press .

- Move  up or down to change the number, then press .

- Repeat steps 3 and 4 to set other channels.

## To return to the normal screen

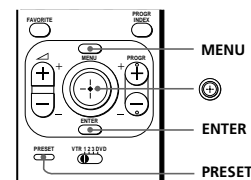
Press MENU.






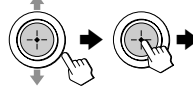


### Note




- If you press the PROGR +/- buttons or number buttons in step 4 above, the TV will display the channel immediately.

## Changing the "CH PRESET" setting

The "CH PRESET" menu allows you to adjust the setup of your TV. For example, you can manually tune in a channel with a weak signal that fails to be tuned in by automatic presetting.



- Press MENU.

- Move  up or down to select , then press .

- Move  up or down to select the desired option, then press .


Select	To
"AUTO PROGRAM"	preset channels automatically.
"MANUAL PROGRAM"	preset channels manually. See "Presetting channels manually" on page 43.
"SKIP"	skip unwanted or unused channels. 1 Either move  up or down, or press the number buttons (or PROGR +/-) until the unused or unwanted channel number appears, then press  . 2 Select "ON", then press  . 3 To disable other channels, repeat steps 1 and 2. To restore the skipped channel, select "OFF" in step 2.
"TV SYS"	select the TV system.
"COL SYS"	select the color system. Normally, set this to "AUTO".

## To return to the normal screen

Press MENU.


### Tip

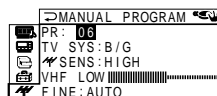
- For details on the menu system and how to use the menu, refer to "Introducing the menu system" on page 29.





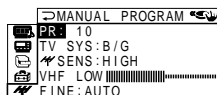
## Presetting channels manually

- 1** After selecting "MANUAL PROGRAM", select the program number to which you want to preset a channel.

(1) Make sure "PR" is selected, then press .





(2) Move  up or down until the program number you want to preset (e.g., program number "10") appears on the menu, then press .

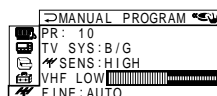




### Tips

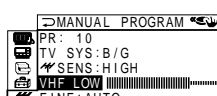
- You can also select the "MANUAL PROGRAM" menu directly by pressing the PRESET button on the remote.
- You can also select the program number with the PROGR +/- or number buttons.

- 2** Select the desired channel.



(1) Move  up or down to select either "VHF LOW", "VHF HIGH", or "UHF", then press .

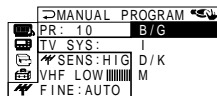




(2) Move  up or down until the desired channel's broadcast appears on the TV screen, then press .

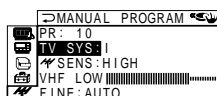


- 3** If the sound of the desired channel is abnormal, select the appropriate TV system.

(1) Move  up or down to select "TV SYS", then press .





(2) Move  up or down until the sound becomes normal, then press .

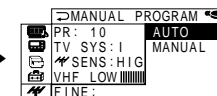




continued

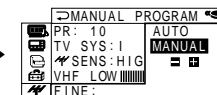
## Changing the "CH PRESET" setting (continued)



- 4** If you are not satisfied with the picture and sound quality, you may be able to improve them by using the "FINE" tuning feature.

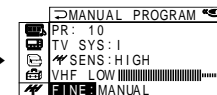
(1) Move  up or down to select "FINE", then press .





(2) Move  up or down to select "MANUAL", then press .

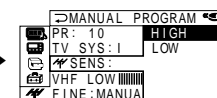


(3) Move  either up, down, left or right until the picture and sound quality are optimal, then press . The + or - icon on the menu flashes while tuning.

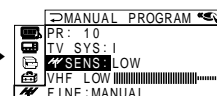


- 5** If the TV signal is too strong and the picture is distorted, you can adjust the TV reception sensitivity.

(1) Move  up or down to select "SENS", then press .



(2) Move  up or down to select "LOW", then press .



## To return to the normal screen



Press MENU.

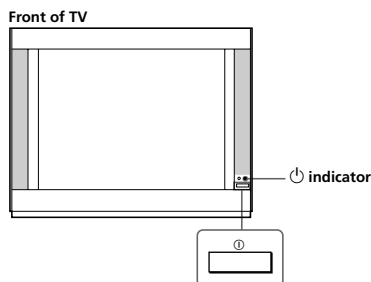
### Notes





- The TV system ("TV SYS") and the TV reception sensitivity ("SENS") settings are memorized for each program number.
- If you preset a locked channel, that channel will be unlocked (see page 40).

## Additional Information

### Self-diagnosis function

Your TV is equipped with a self-diagnosis function. If there is a problem with your TV, the  (standby) indicator flashes red. The number of times the  indicator flashes indicates the possible causes.











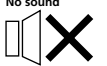








- 1** Check that the  indicator flashes red a number of times between 3-second intervals.
- 2** Count the number of times the  indicator flashes.
- 3** Press  (main power) to turn off your TV.
- 4** Inform your nearest Sony service center about the number of times the  indicator flashed.  
Be sure to note the model name and serial number located on the rear of your TV.

Additional Information

### Troubleshooting

If you have any problem while viewing your TV, please check the following troubleshooting guide. If the problem persists, contact your Sony dealer.


Symptom	Possible cause	Solutions	Page
<b>Snowy picture</b> 	<ul style="list-style-type: none"> <li>The connection is loose or the cable is damaged.</li> <li>Channel presetting is inappropriate or incomplete.</li> </ul>	<ul style="list-style-type: none"> <li>Check the antenna cable and connection on the TV, VCR and at the wall.</li> <li>Press the PRESET button to display the "MANUAL PROGRAM" menu and preset the channel again.</li> </ul>	4 43
<b>Noisy sound</b> 	<ul style="list-style-type: none"> <li>The antenna type is inappropriate.</li> <li>The antenna direction needs adjustment.</li> <li>Signal transmission is low.</li> </ul>	<ul style="list-style-type: none"> <li>Check the antenna type (VHF/UHF). Contact a Sony dealer for advice.</li> <li>Adjust the antenna direction. Contact a Sony dealer for advice.</li> <li>Try using a booster.</li> </ul>	– – –
<b>Distorted picture</b> 	<ul style="list-style-type: none"> <li>Broadcast signals are too strong.</li> </ul>	<ul style="list-style-type: none"> <li>Press the PRESET button to display the "MANUAL PROGRAM" menu. Then, select "SENS: LOW".</li> <li>Turn off or disconnect the booster if it is in use.</li> </ul>	44 –
<b>Noisy sound</b> 			
<b>Good picture</b> 	<ul style="list-style-type: none"> <li>The TV system setting is inappropriate.</li> </ul>	<ul style="list-style-type: none"> <li>If the sound of all the channels are noisy, display the "CH PRESET" menu and select "AUTO PROGRAM" to preset the channels again.</li> <li>If the sound of some channels is noisy, select the channel, then display the "CH PRESET" menu and select the appropriate TV system ("TV SYS").</li> </ul>	42 43
<b>Noisy sound</b> 	<ul style="list-style-type: none"> <li>The digital audio signal is inappropriate.</li> </ul>	<ul style="list-style-type: none"> <li>Set "DIGITAL IN: OFF" in the "A/V CONTROL" menu and connect  L and R (component video input) on your TV to receive analog audio signals.</li> </ul>	7, 34
<b>No picture</b> 	<ul style="list-style-type: none"> <li>The power cord, antenna or VCR is not connected.</li> <li>The TV is not turned on.</li> </ul>	<ul style="list-style-type: none"> <li>Check the power cord, antenna and the VCR connections.</li> <li>Press  (power).</li> <li>Press  (main power) on the TV to turn off the TV for about five seconds, then turn it on again.</li> </ul>	4 10 11
<b>No sound</b> 			

Symptom	Possible cause	Solutions	Page
<b>Good picture</b> 	<ul style="list-style-type: none"> <li>The volume level is too low.</li> </ul>	<ul style="list-style-type: none"> <li>Press <math>\triangle</math> + to increase the volume level.</li> </ul>	11
	<ul style="list-style-type: none"> <li>The sound is muted.</li> </ul>	<ul style="list-style-type: none"> <li>Press <math>\times</math> to cancel the muting.</li> </ul>	11
	<ul style="list-style-type: none"> <li>The broadcast signal has a transmission problem.</li> </ul>	<ul style="list-style-type: none"> <li>Press A/B until a better sound is heard. (Except KV-ES34M80)</li> </ul>	23
<b>No sound</b> 	<ul style="list-style-type: none"> <li>The digital audio signal is inappropriate.</li> </ul>	<ul style="list-style-type: none"> <li>Set "DIGITAL IN: OFF" in the "A/V CONTROL" menu and connect <math>\text{---}</math> L and R (component video input) on your TV to receive analog audio signals.</li> </ul>	7, 34
	<ul style="list-style-type: none"> <li>The "DIGITAL IN" setting in the "A/V CONTROL" menu is inappropriate.</li> </ul>	<ul style="list-style-type: none"> <li>When connecting to <math>\text{---}</math> (component video input) on your TV, set "DIGITAL IN: ON" to receive digital audio signals through <math>\text{---}</math> DIGITAL IN, or set "DIGITAL IN: OFF" to receive analog audio signals through <math>\text{---}</math> L and R.</li> </ul>	34
<b>Dotted lines or stripes</b> 	<ul style="list-style-type: none"> <li>There is local interference from cars, neon signs, hair dryers, power generators, etc.</li> </ul>	<ul style="list-style-type: none"> <li>Do not use a hair dryer or other equipment near the TV.</li> <li>Adjust the antenna direction for minimum interference. Contact a Sony dealer for advice.</li> </ul>	—
<b>Double images or "ghosts"</b> 	<ul style="list-style-type: none"> <li>Broadcast signals are reflected by nearby mountains or buildings.</li> </ul>	<ul style="list-style-type: none"> <li>Use a highly directional antenna.</li> <li>Use the fine tuning ("FINE") function.</li> </ul>	— 44
	<ul style="list-style-type: none"> <li>The antenna direction needs adjustment.</li> </ul>	<ul style="list-style-type: none"> <li>Adjust the antenna direction. Contact a Sony dealer for advice.</li> </ul>	—
	<ul style="list-style-type: none"> <li>Use of a booster is inappropriate.</li> </ul>	<ul style="list-style-type: none"> <li>Turn off or disconnect the booster if it is in use.</li> </ul>	—
<b>No color</b> 	<ul style="list-style-type: none"> <li>The color level setting is too low.</li> </ul>	<ul style="list-style-type: none"> <li>Display the "A/V CONTROL" menu and select "ADJUST" of "PICTURE MODE", then adjust the "COLOR" level.</li> </ul>	33
	<ul style="list-style-type: none"> <li>The color system setting is inappropriate.</li> </ul>	<ul style="list-style-type: none"> <li>Display the "CH PRESET" menu and check the color system ("COL SYS") setting (usually set this to "AUTO").</li> </ul>	42
	<ul style="list-style-type: none"> <li>The antenna direction needs adjustment.</li> </ul>	<ul style="list-style-type: none"> <li>Adjust the antenna direction. Contact a Sony dealer for advice.</li> </ul>	—
<b>Abnormal color patches</b> 	<ul style="list-style-type: none"> <li>The magnetic disturbance from external speakers or other equipment, or the direction of the earth's magnetic field may affect the TV.</li> </ul>	<ul style="list-style-type: none"> <li>Locate external speakers or other equipment away from the TV. Do not move the TV while the TV is turned on. Press <math>\text{---}</math> (main power) on the TV to turn off the TV for about five minutes, then turn it on again.</li> </ul>	—

continued

Additional Information | 47

## Troubleshooting (continued)

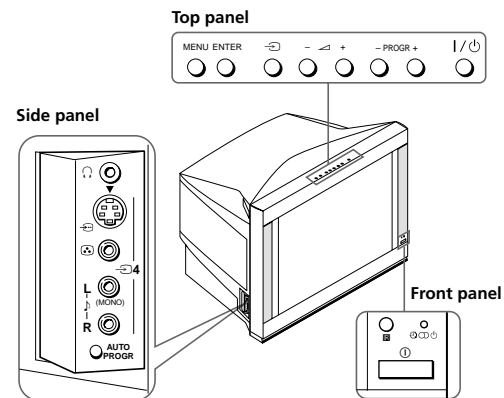
Symptom	Possible cause	Solutions	Page
TV cannot receive stereo broadcast signal. (Except KV-ES34M80)	<ul style="list-style-type: none"> <li>The stereo reception setting is inappropriate.</li> </ul>	<ul style="list-style-type: none"> <li>Press A/B until "AUTO" appears on the screen.</li> </ul>	23
Stereo broadcast sound switches on and off or is distorted. <b>OR</b> The sound switches between stereo and monaural frequently. (Except KV-ES34M80)	<ul style="list-style-type: none"> <li>The connection is loose or the cable is damaged.</li> <li>The antenna direction needs adjustment.</li> <li>The broadcast signal has a transmission problem.</li> </ul>	<ul style="list-style-type: none"> <li>Check the antenna cable and connection on the TV, VCR and on the wall.</li> <li>Adjust the antenna direction. Contact a Sony dealer for advice.</li> <li>Press A/B until a better sound is heard.</li> </ul>	4 — 23
"100?" appears at the top of the screen after approximately 10 seconds and there is no Teletext display.	<ul style="list-style-type: none"> <li>The channel carries no Teletext broadcast. (KV-ES34M31/ES34M61 only)</li> </ul>	—	25
Teletext display is incomplete (snowy picture or double images). (KV-ES34M31/ES34M61 only)	<ul style="list-style-type: none"> <li>Connection is loose or the cable is damaged.</li> <li>The antenna direction is inappropriate.</li> <li>Signal transmission is too low.</li> </ul>	<ul style="list-style-type: none"> <li>Check the antenna cable and connection on the TV, VCR, and at the wall.</li> <li>Adjust the antenna direction. Contact a Sony dealer for advice.</li> <li>Try using a booster.</li> <li>Use the fine tuning (FINE) function.</li> </ul>	4 — 44
<b>Picture slant</b> 	<ul style="list-style-type: none"> <li>Terrestrial magnetism is affecting your TV set.</li> </ul>	<ul style="list-style-type: none"> <li>Display the "SET UP" menu and adjust "PIC ROTATION" so that the picture is aligned to the TV screen.</li> </ul>	39
Lines moving across the TV screen.	<ul style="list-style-type: none"> <li>There is interference from external sources, e.g., heavy machineries, nearby broadcast station.</li> </ul>	<ul style="list-style-type: none"> <li>Use the fine tuning ("FINE") function.</li> </ul>	44
The $\text{---}$ indicator on your TV flashes red a number of times between 3-second intervals.	<ul style="list-style-type: none"> <li>Your TV may need servicing.</li> </ul>	<ul style="list-style-type: none"> <li>Contact your nearest Sony service center.</li> </ul>	45

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Symptom	Possible cause	Solutions	Page
TV cabinet creaks.	<ul style="list-style-type: none"> <li>Changes in room temperature sometimes make the TV cabinet expand or contract, causing a noise. This does not indicate a malfunction.</li> </ul>	—	—
A small "boom" sound is heard when the TV is turned on.	<ul style="list-style-type: none"> <li>The TV's demagnetizing function is working. This does not indicate a malfunction.</li> </ul>	—	—
Static discharge is felt when touching the TV cabinet.	<ul style="list-style-type: none"> <li>This is the same static discharge that is felt when touching metal door handles or car doors especially when the air is dry, for example in winter. This does not indicate a malfunction.</li> </ul>	—	—

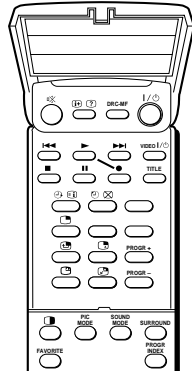
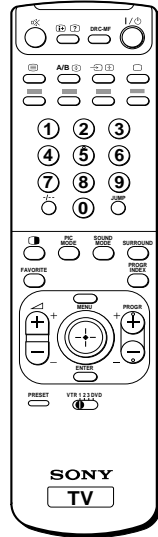
## Identifying parts and controls

### Front, top and side panels



Button	Function	Page
<b>Side panel</b>		
Headphone jack	Headphone jack.	—
AUTO PROGR	Preset channels automatically.	5
<b>Front panel</b>		
I/O	Turn off completely or turn on the TV.	10
<b>Top panel</b>		
I/O	Turn off temporarily or turn on the TV.	10
PROGR +/-	Select program number.	10
+/-	Adjust volume.	11
Directional pad	Select TV or video input.	11
ENTER	Confirm selected items.	31
MENU	Display the menu.	31

## Remote control



The names/symbols of buttons on the remote are indicated in different colors to represent the available functions.

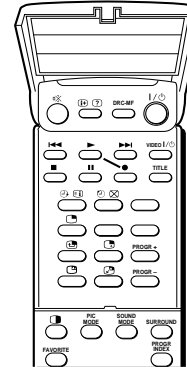
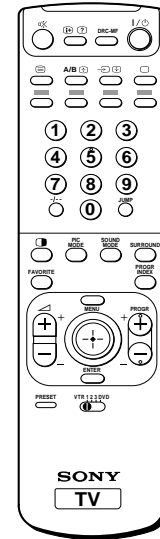
Label color	Button function
White	For general TV operations
Green	For Teletext operations (KV-ES34M31/ES34M61 only)
Yellow	For PIP operations

Button	Function	Page
I / $\phi$	Turn off temporarily or turn on the TV.	10
PROGR +/-	Select program number.	10
0 - 9, +/-	Input numbers.	10
ⓘ	Display on-screen information.	11
MUTE	Mute the sound.	11
TV	Display the TV program.	11
VIDEO	Select TV or video input.	11
Δ +/-	Adjust volume.	11
JUMP	Jump to previous channel.	11
<b>Timer operations</b>		
⌚	Set TV to turn on automatically.	13
⌚	Set TV to turn off automatically.	13
SOUND MODE	Select sound mode.	14
PIC MODE	Select picture mode.	14
DRC-MF	Select DRC-MF mode.	15
<b>Favorite Channel operations</b>		
FAVORITE	Display favorite channels.	16
⊙	Select desired channel.	16
<b>PIP and Twin picture operations</b>		
Ⓜ	Display the PIP screen.	17
Ⓜ	Display TWIN pictures.	17
⊙	Adjust Twin picture size.	18
PROGR +/-	Change program in PIP/ Twin picture.	18
PROGR -	Select video input for PIP/ Twin picture.	18
Ⓜ	Swap main and PIP/ Twin picture.	18
Ⓜ	Freeze PIP screen.	18
Ⓜ	Adjust position of PIP screen.	18

continued

Additional Information | 51

## Identifying parts and controls (continued)

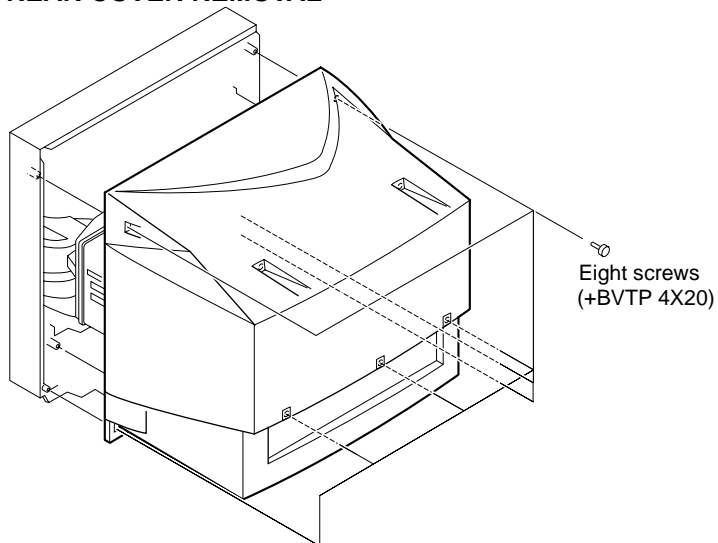


Button	Function	Page
<b>Program Index operations</b>		
PROGR INDEX	Display all preset TV programs.	19
PROGR +/-	View next/previous 12 TV programs.	20
⊙	Select desired channel.	20
SURROUND	Select surround mode.	22
<b>Stereo/bilingual operations (Except KV-ES34M80)</b>		
A/B	Select stereo/bilingual mode.	23
<b>Teletext operations (KV-ES34M31/ES34M61 only)</b>		
Ⓜ	Display Teletext broadcast.	25
Ⓜ	Display Teletext service contents.	26
Ⓜ	Stop Teletext page from scrolling.	26
?	Reveal concealed information.	26
Ⓜ	Enlarge the Teletext display.	26
Ⓜ	Show TV screen while waiting for Teletext page.	26
0 - 9	Input Teletext page number.	26
PROGR +/-	Display the next or previous page.	26
(red, green, yellow, blue)	Access a FASTEXT menu.	26
<b>Optional components operations</b>		
VTR	Set up the remote.	27
VIDEO I / $\phi$	Power.	28
TITLE	Display the title menu.	28
▶	Play.	28
⏭	Fast forward/Search forward.	28
⏮	Rewind/Search backward.	28
●	Record.	28
■	Stop.	28
⏸	Pause.	28
<b>Menu operations</b>		
MENU	Display the menu.	31
⊙	Select, adjust and confirm selected items.	31
ENTER	Confirm selected items.	31
PRESET	Display "MANUAL PROGRAM" menu.	43

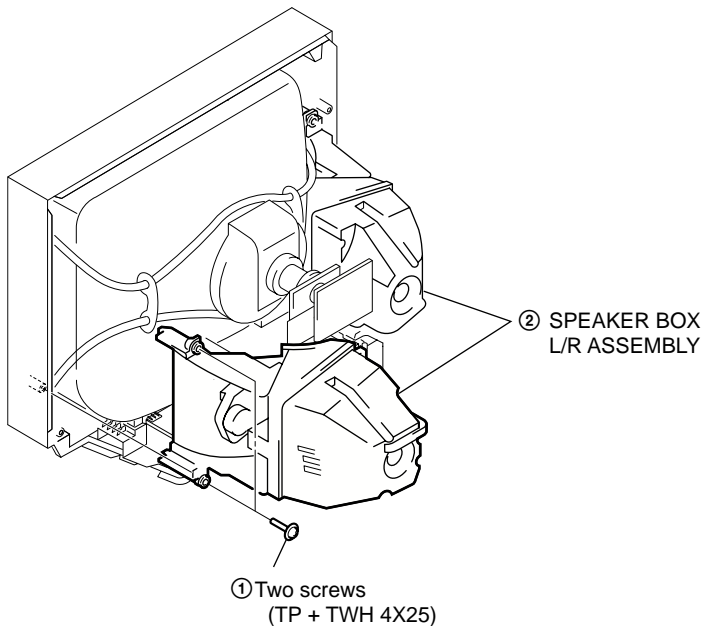
52 | Additional Information

## SECTION 2 DISASSEMBLY

### 2-1. REAR COVER REMOVAL

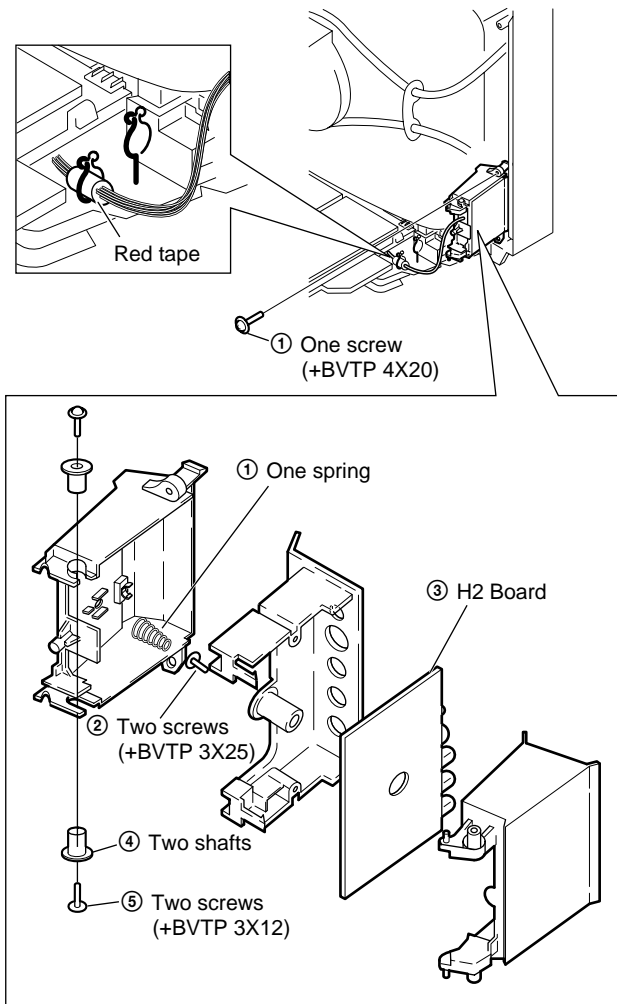


### 2-2. SPEAKER BOX REMOVAL

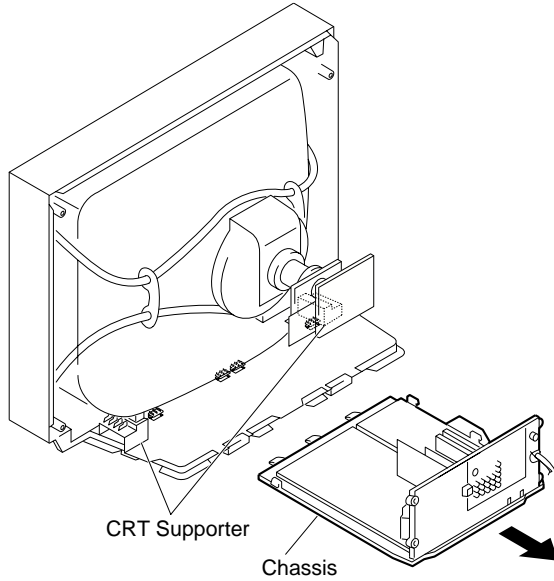


### 2-3. H2 BOARD REMOVAL

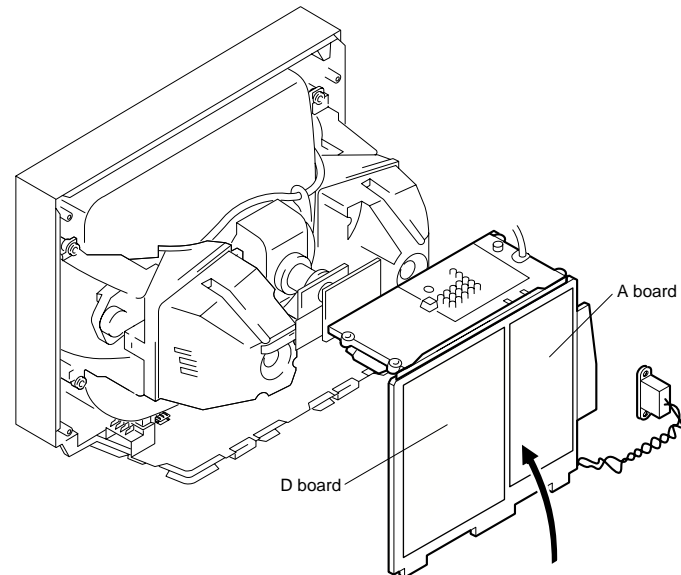
Caution: Please make sure that the red colour taped point is just placed with the purse lock when treating the leads to H2 board. If lead treatment is wrongly arranged, it will affect the door opening and closing malfunction.



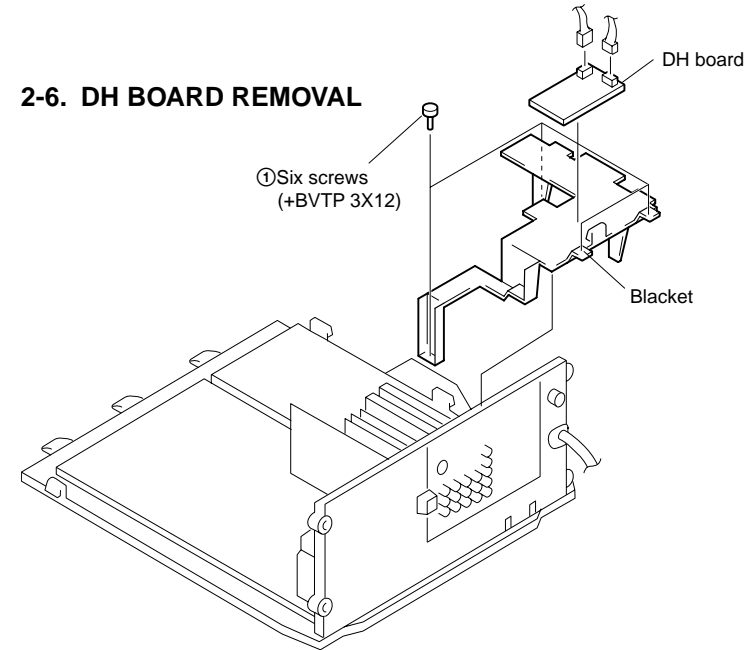
## 2-4. CHASSIS ASSY REMOVAL



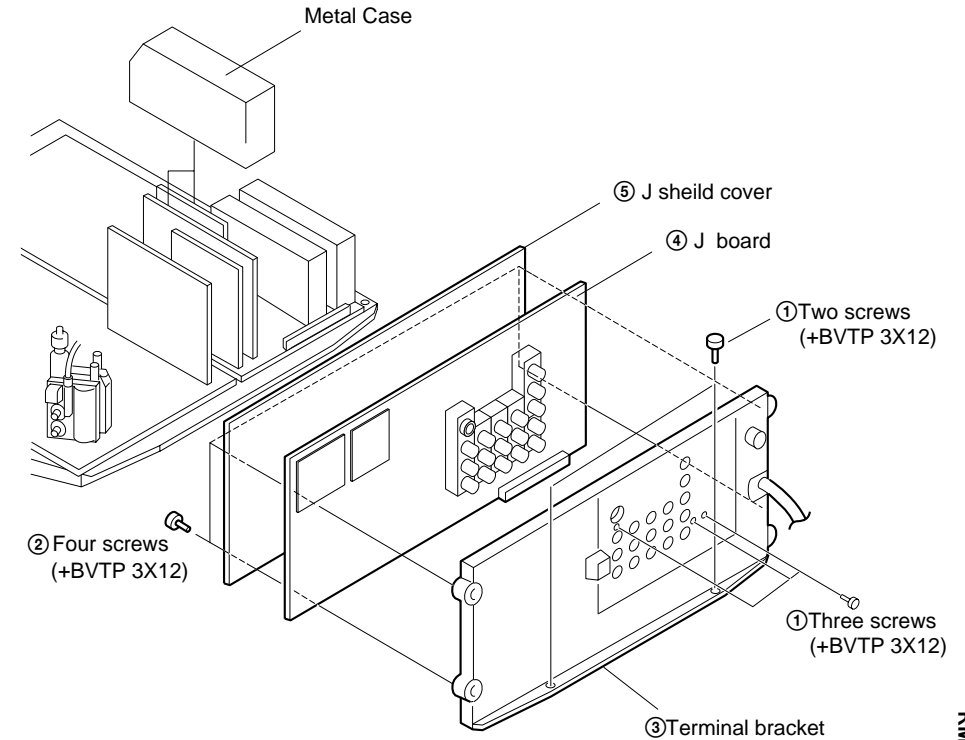
## 2-5. SERVICE POSITION



## 2-6. DH BOARD REMOVAL

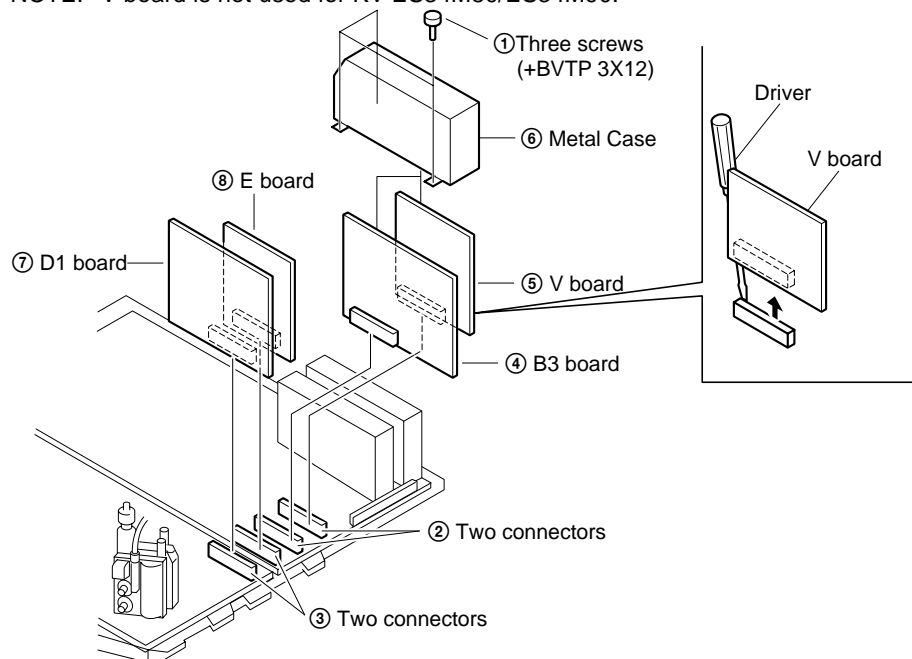


## 2-7. J BOARD REMOVAL

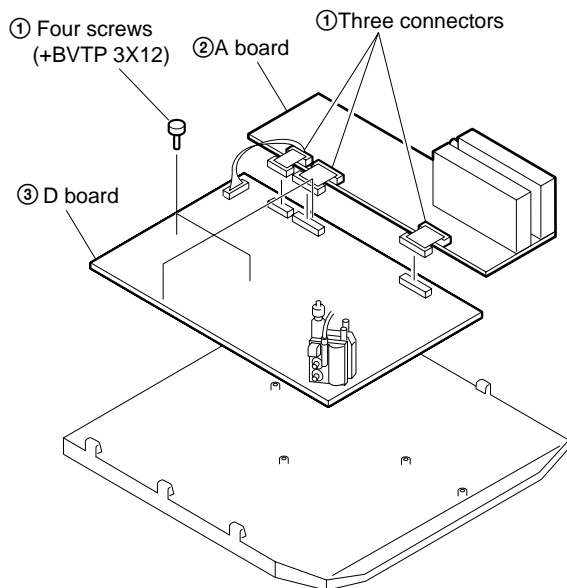


## 2-8. B3, D1 AND E BOARDS REMOVAL

NOTE: V board is not used for KV-ES34M80/ES34M90.

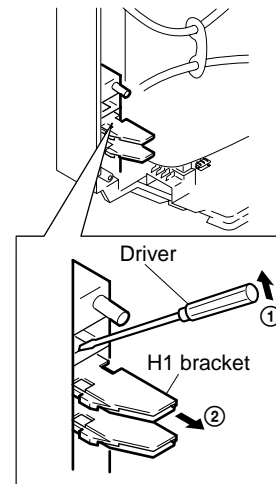


## 2-9. A AND D BOARDS REMOVAL



## 2-10. H1 BOARD REMOVAL

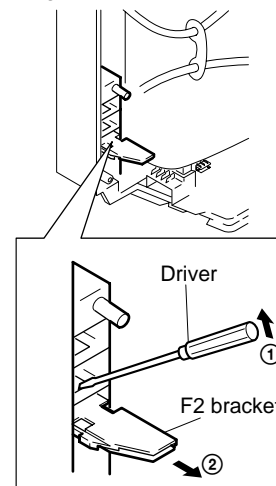
NOTE : Push the hook down using the tip of a screwdriver and at the same time pull the H1 bracket.



## 2-11. F2 BOARD REMOVAL

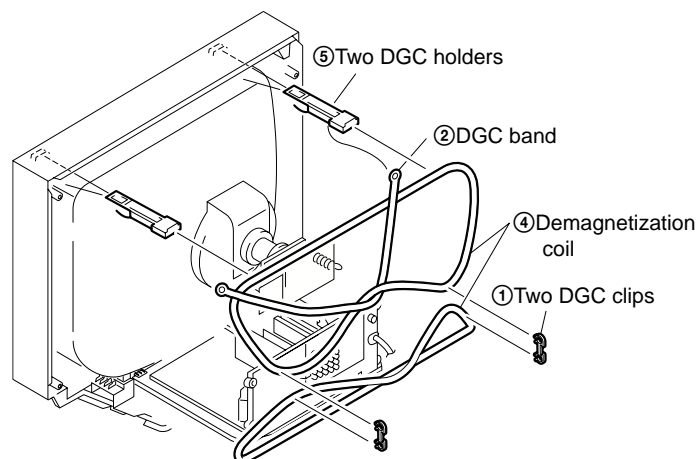
NOTE : To remove F2 board, firstly remove the H1 board. Then, push the hook down using the tip of a screwdriver and at the same time pull the F2 bracket.

Caution : When removing the F2 board, please turn off the main AC supply and disconnect the AC plug.



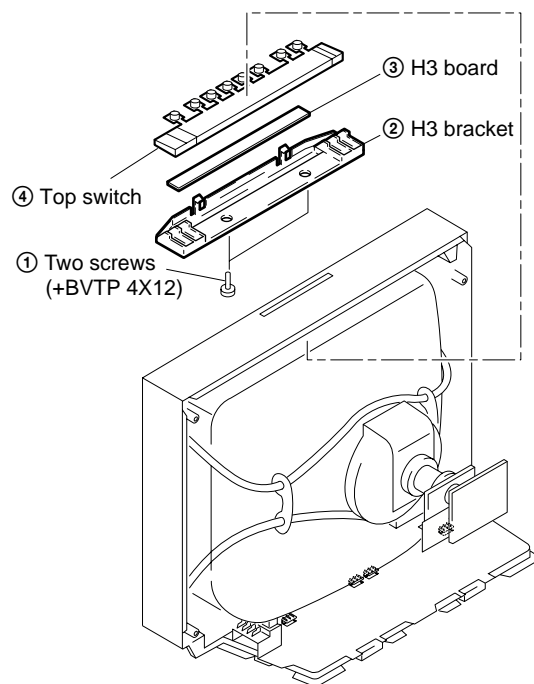


## 2-12. DEMAGNETIZATION COIL REMOVAL



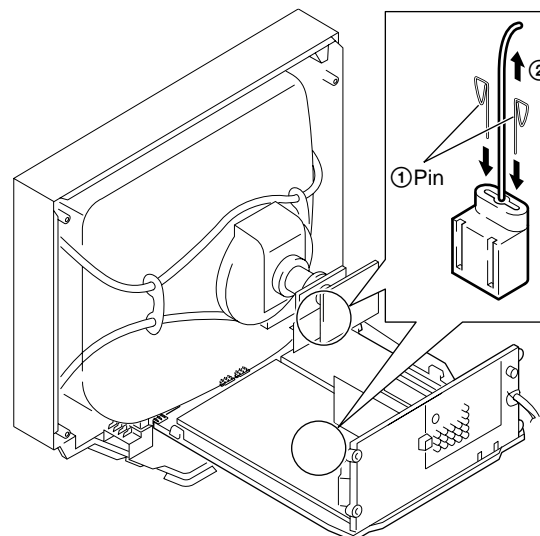
## 2-13. TOP SWITCH REMOVAL (H3 BOARD REMOVAL)

NOTE : To remove H3 board, the CRT has to be removed first.



## 2-14. G2 LEAD REMOVAL

NOTE : Insert pin to both edge holes on socket and release the lock.

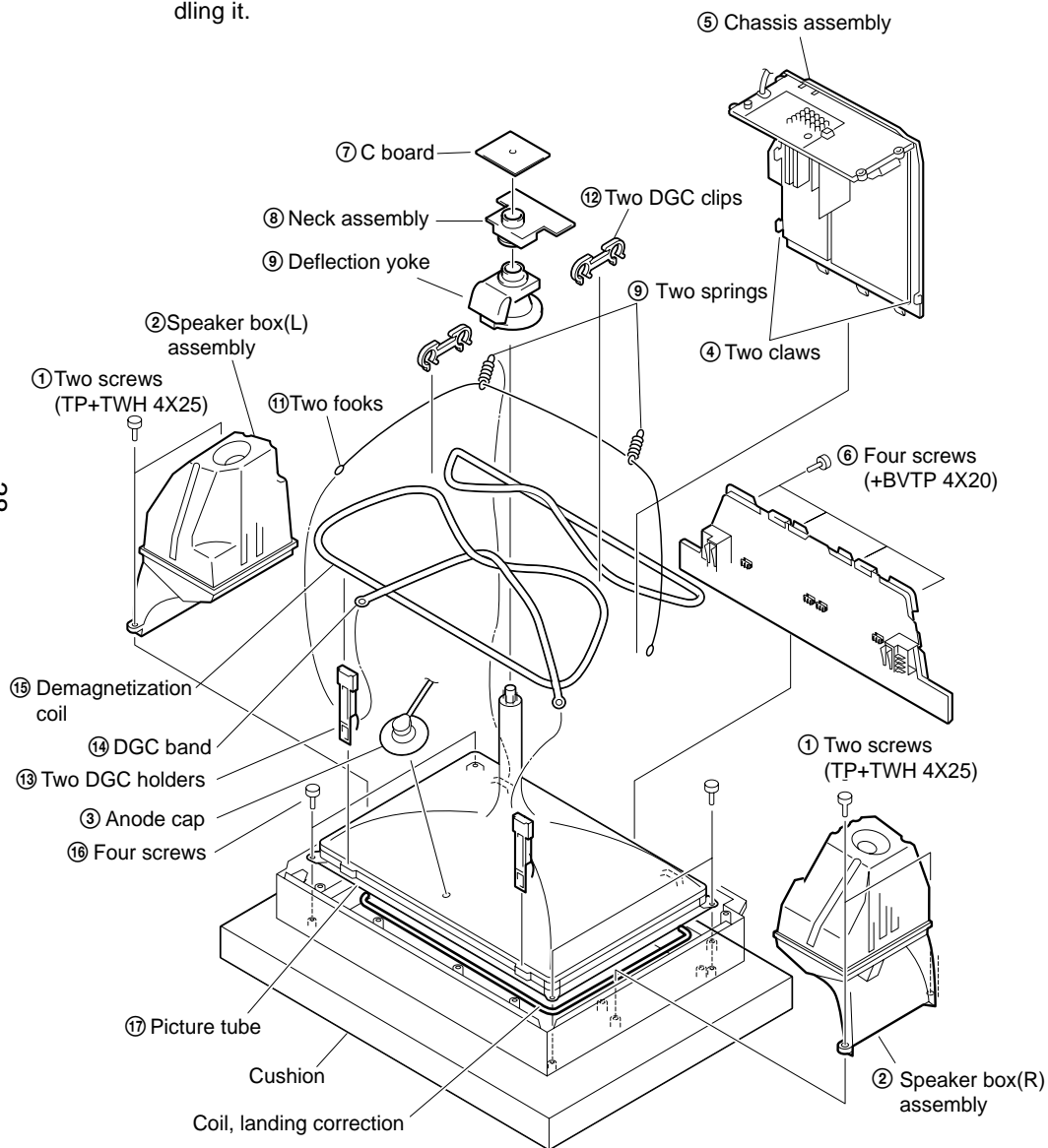


## 2-15. PICTURE TUBE REMOVAL

NOTE : i) The picture tube for OCE model is upside-down, and the position for the anode-cap and springs are changed accordingly.

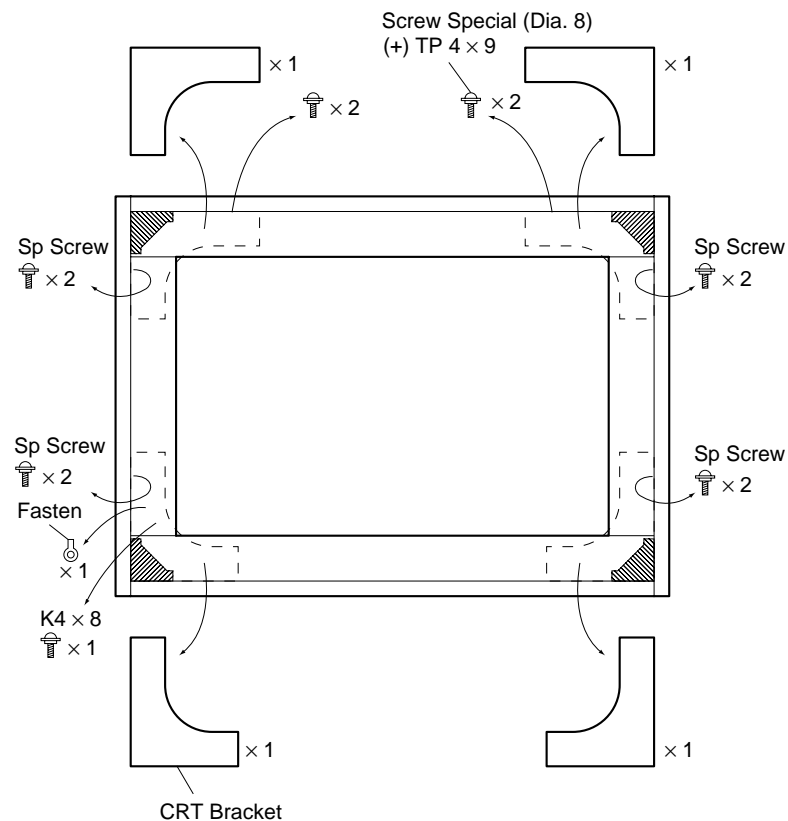
ii) Prior to picture tube removal, please remove the front cover first.

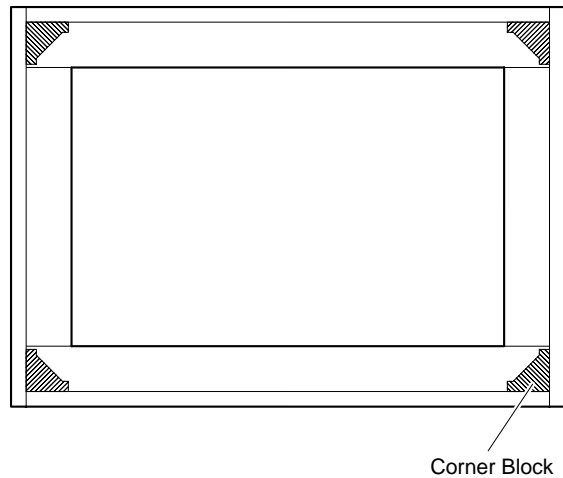
Caution : Aluminium frame is easily scratched if extra caution is not taken when handling it.



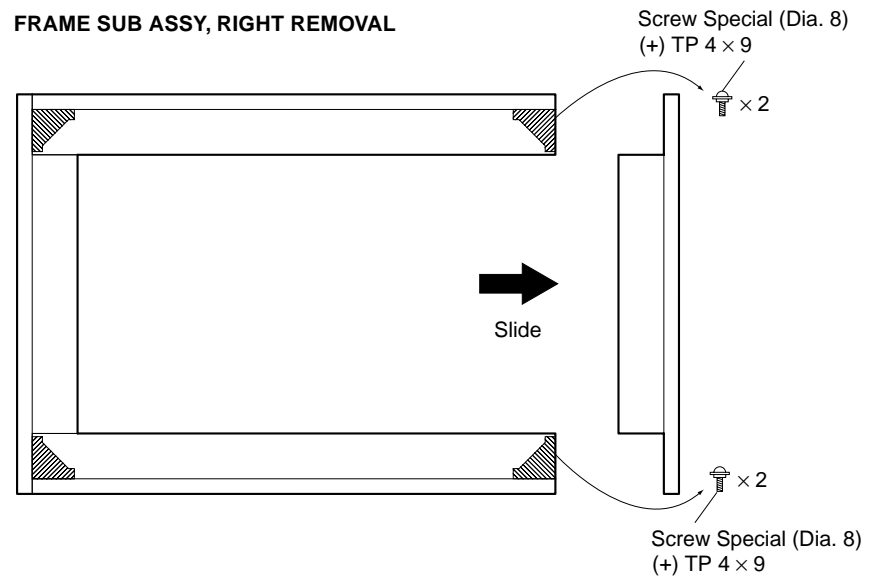
## 2-16. FRAME SUB-ASSY DISASSEMBLY

①

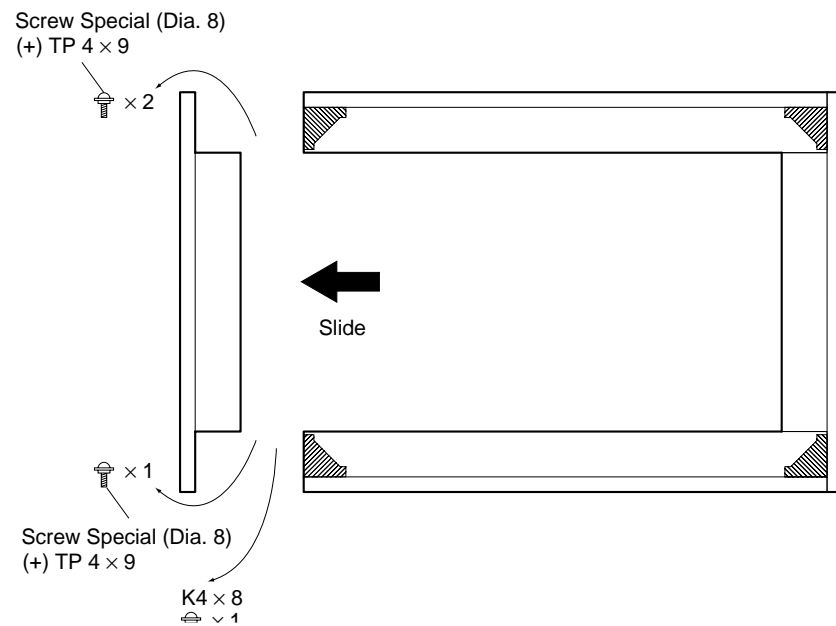




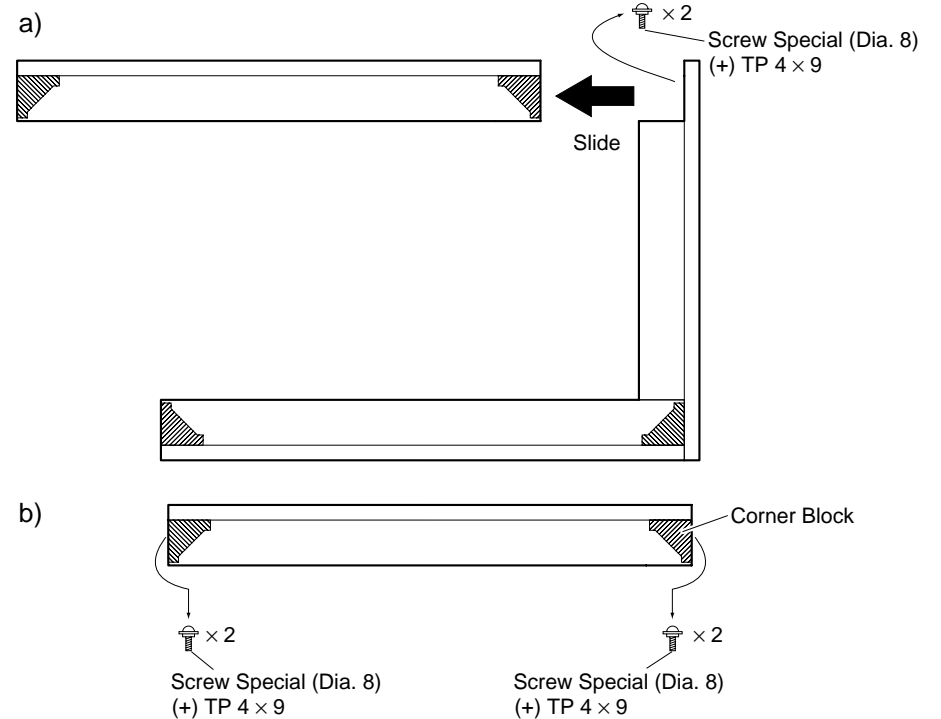
#### FRAME SUB ASSY, RIGHT REMOVAL



#### FRAME SUB ASSY, LEFT REMOVAL

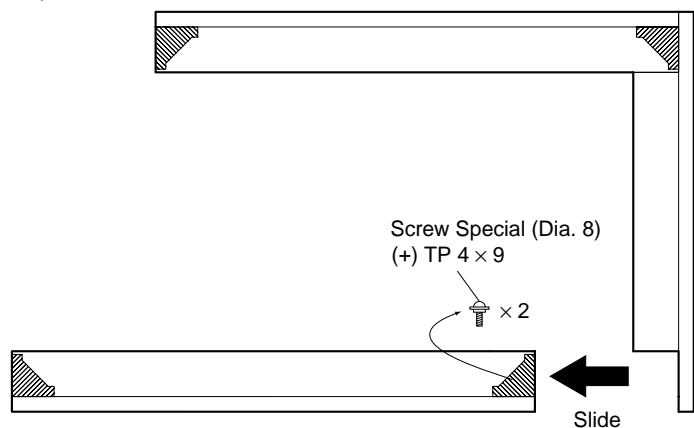


#### FRAME SUB ASSY, TOP REMOVAL

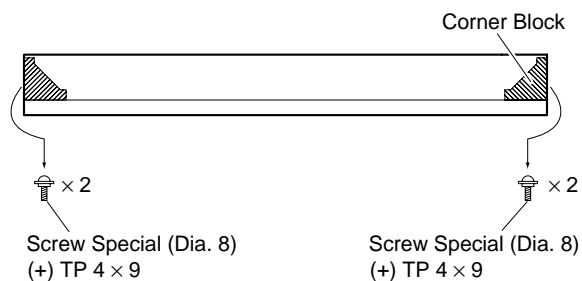


## FRAME SUB ASSY, BOTTOM REMOVAL

a)



b)

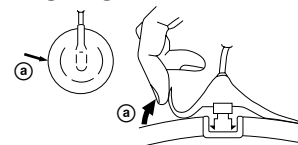


NOTE : When replacing the Frame Sub-Assy Top and Bottom, fix the original corner block to the new part.

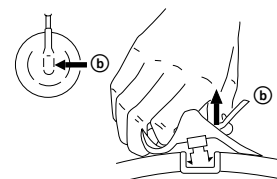
## •REMOVAL OF ANODE-CAP

NOTE : After removing the anode, short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT.

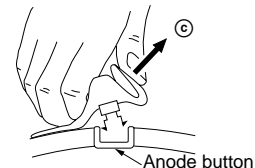
## •REMOVING PROCEDURES



① Turn up one side of the rubber cap in the direction indicated by the arrow a).



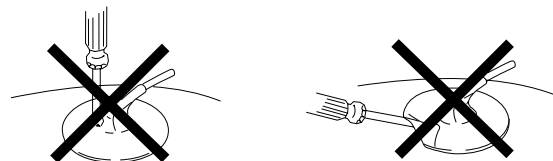
② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow b).



③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling it up in the direction of the arrow c).

## • HOW TO HANDLE AN ANODE-CAP

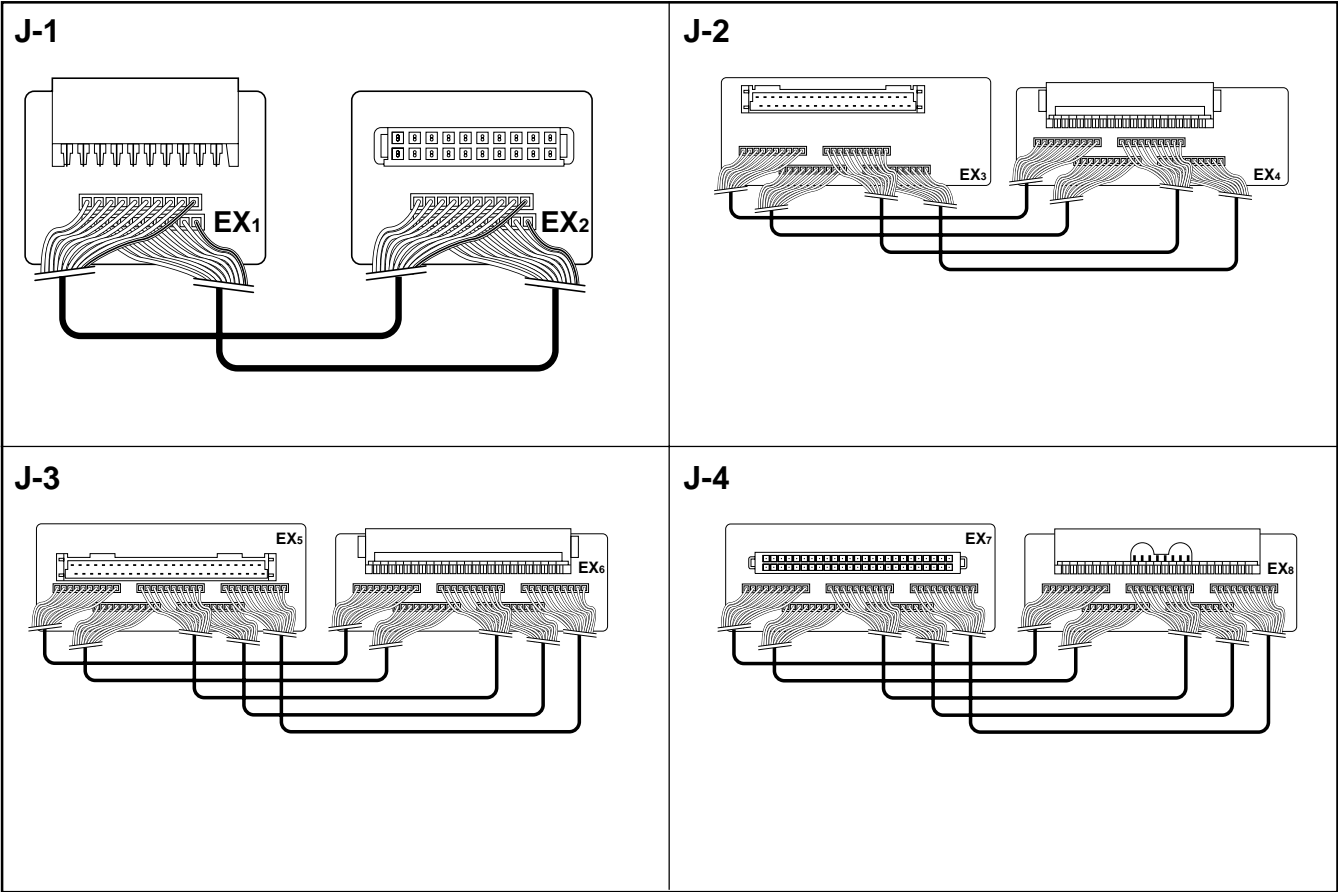
- ① Do not damage the surface of anode-caps with sharp shaped objects.
- ② Do not press the rubber too hard so as not to damage the inside of anode-cap. A metal fitting called the shatter-hook terminal is built into the rubber.
- ③ Do not turn the foot of rubber over too hard. The shatter-hook terminal will stick out or damage the rubber.



SECTION 3  
SERVICE JIG

3-1. JIGS REQUIRED FOR SERVICING

REF NO.	DESCRIPTION	PART NO.	REMARK
J-1	TOOL (20P), SERVICE	3-702-763-01	For A to V board extension
J-2	TOOL (40P), SERVICE	3-702-764-01	For A to E board extension
J-3	TOOL (50P-A), SERVICE	3-702-765-01	For A to B3 board extension
J-4	TOOL (50P-J), SERVICE	3-702-766-01	For A to J board extension For D to D1 board extension



## SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with rated power supply voltage unless otherwise noted.

Controls and switches should be set as follows unless otherwise noted:

PICTURE control ..... normal

BRIGHTNESS control ..... normal

Perform the adjustments in the following order :

1. Beam Landing
2. Convergence
3. Focus
4. White Balance

**Note :** Test Equipment Required.

1. Color-bar/Pattern Generator
2. Degausser
3. Oscilloscope

#### Preparation :

- In order to reduce the influence of geomagnetism on the set's picture tube, face it east or west.
- Switch on the set's power and degauss with the degausser.

#### 4-1. BEAM LANDING

1. Input a white signal with the pattern generator.

Contrast } normal  
Brightness }

2. Position neck assy as shown in Fig4-1.
3. Set the pattern generator raster signal to a green raster.
4. Move the deflection yoke to the rear and adjust with the purity control so that the green is at the center and the blue and the red take up equally sized areas on each side.  
(See Figures 4-1 through 4-3.)
5. Move the deflection yoke forward and adjust so that the entire screen is green. (See Figure 4-2.)
6. Switch the raster signal to blue, then to green and verify the condition.
7. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws and DY spacers.
8. If the beam does not land correctly in all the corners, use a magnet to adjust it.  
(See Figure 4-4.)

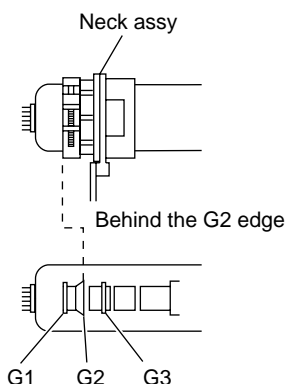


Fig. 4-1

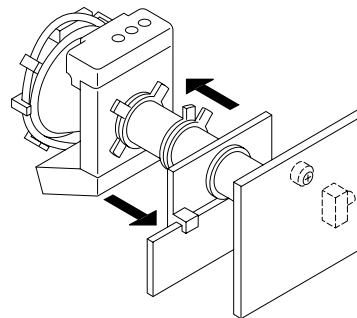


Fig. 4-2

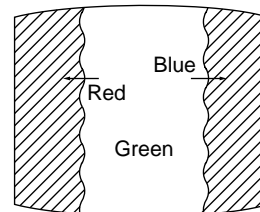


Fig. 4-3

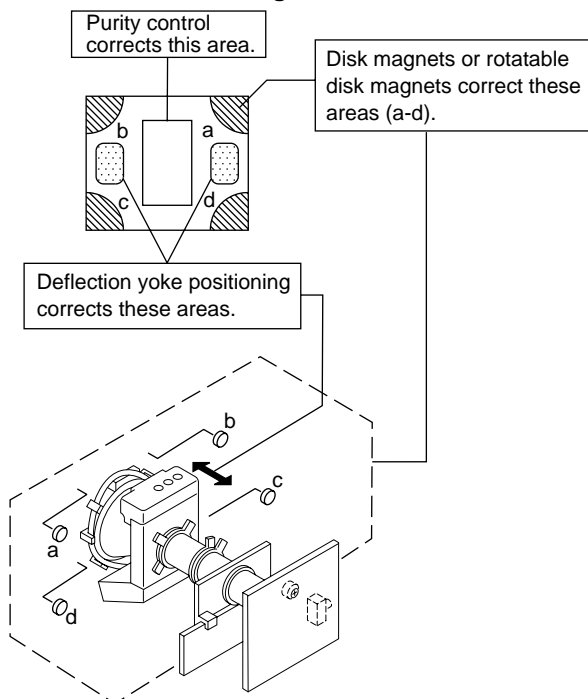


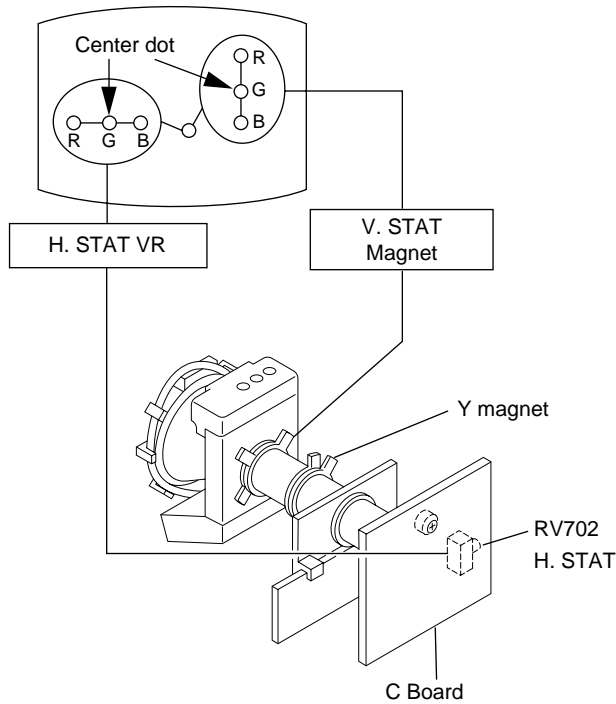
Fig. 4-4

## 4-2. CONVERGENCE ADJUSTMENT

### Preparation :

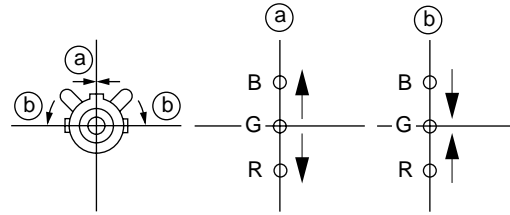
- Before starting this adjustment, adjust the focus, horizontal size and vertical size.
- Set the PICTURE and BRIGHTNESS 50%.
- Cross hatch / Dot pattern.

### (1) Horizontal and Vertical Static Convergence

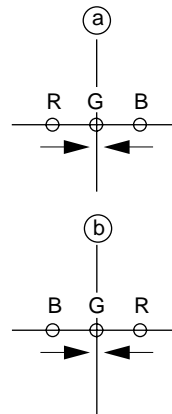


1. (Moving horizontally), adjust the H.STAT control so that the red, green and blue dots are on top of each other at the center of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green and blue dots are on top of each other at the center of the screen.
3. Adjust Horizontal Trapezoid with "DAC 04 HTR" in Service Mode to make H-Trapezoid distortion best.
4. If the H.STAT variable resistor cannot bring the red, green and blue dots together at the center of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V.STAT magnet in the manner given below.  
(In this case, the H.STAT variable resistor and the V.STAT magnet influence each other, so be sure to perform adjustments while tracking.)

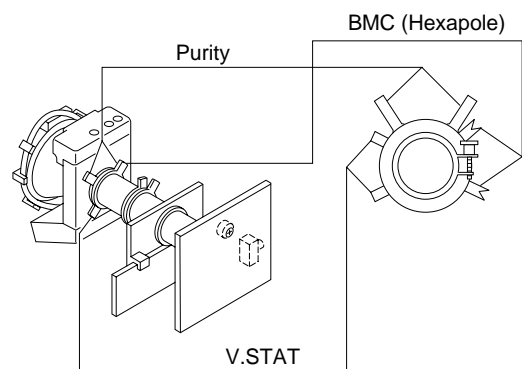
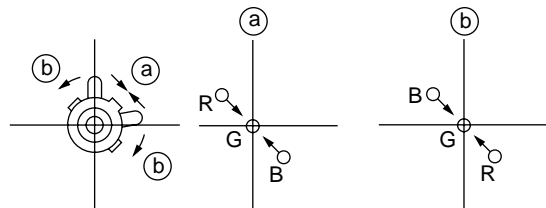
### ① V. STAT



### ② H. STAT VR

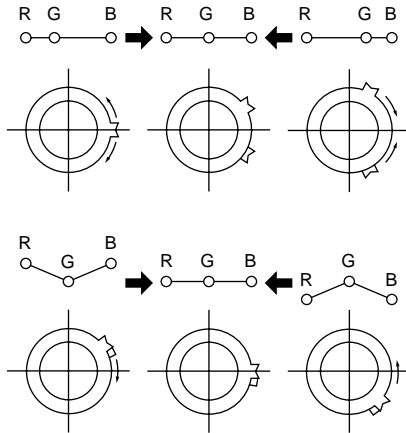


### ③



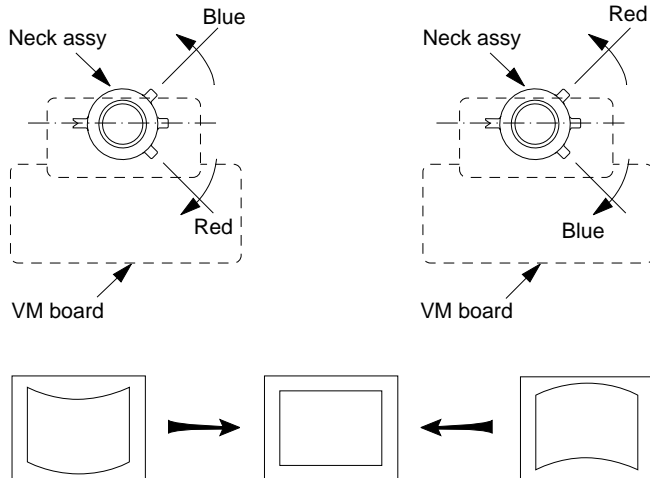
## ④ BMC (Hexapole) Magnet.

If the red, green and blue dots are not balanced or aligned, then use the BMC magnet to adjust in the manner described below.



## ⑤ Y separation axis correction magnet adjustment.

1. Receive the cross-hatch signal and adjust [PICTURE] to [MIN] and [BRIGHTNESS] to [STANDARD] .
2. Adjust the Y separation axis correction magnet on the neck assembly so that the horizontal lines at the top and bottom of the screen are straight.

**Note**

1. The Red and Blue magnets should be equally far from the horizontal center line.
2. Do not separate the Red and Blue magnets too far. (Less than 8 mm)

## (2) Dynamic Convergence Adjustment

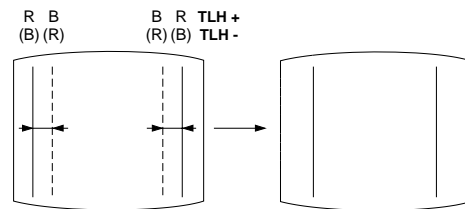
**Preparation:**

- Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence
- Set the PICTURE and BRIGHTNESS to normal.

**1. Adjust TLH. (TLH correction piece)**

- ① Receive the dot/hatch pattern signal and adjust picture quality by the menu.
- ② Correct horizontal mis-convergence of red and blue of both sides on the X axis.

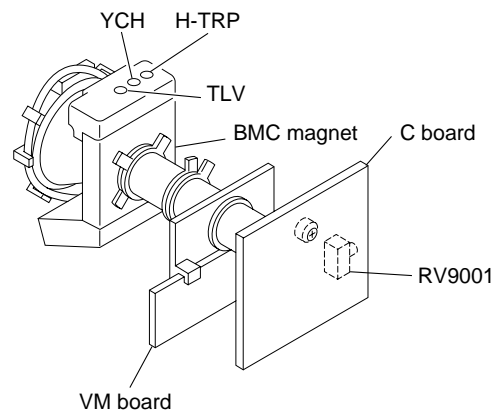
When red is outside insert BMC magnet to right side (THL+) views from DY neck. And when blue is outside, insert it to left side (THL-) and take both sides.

**2. Adjust V TILT-TLV (TLV 34")**

Correct the vertical mis-convergence of red and blue of vertically sides on the Y axis.

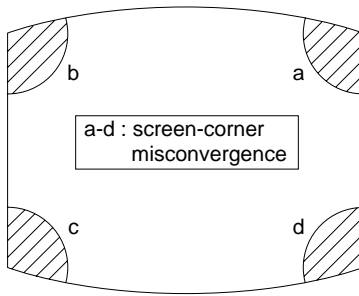
**3. Adjust YCH.**

Adjust horizontal mis-convergence of red and blue of vertically sides on the Y axis. Mentioned above steps 2 to 4 are adjusting respectively perform minuteness tracking.

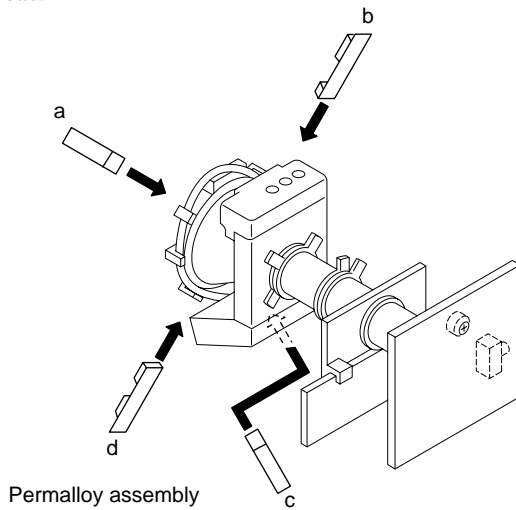




### (3) Screen-corner Convergence



Fix a Permalloy assy corresponding to the misconverged areas.

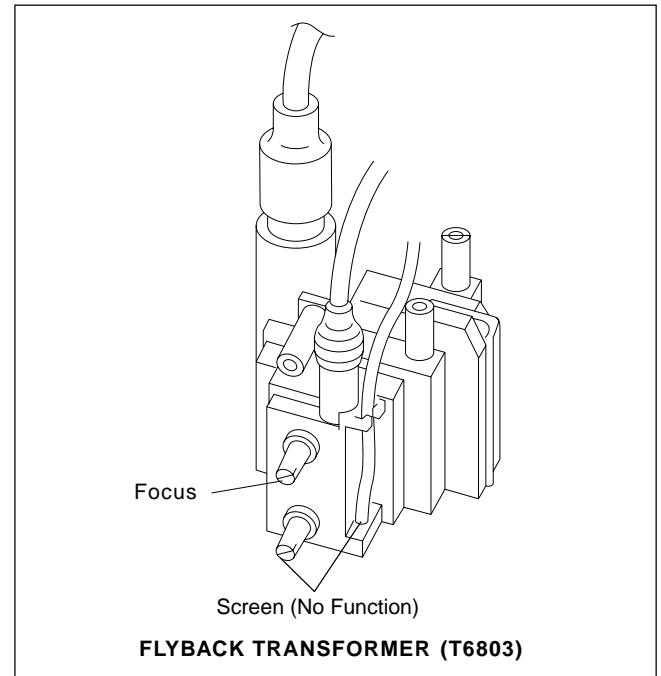


### 4-3. FOCUS ADJUSTMENT

#### Note

Focus adjustment should be completed before W/B adjustment.

- (1) Receive digital monoscope pattern.
- (2) Set "A/V CONTROL" to "STANDARD".
- (3) Adjust FOCUS VR so that the center of the screen becomes justfocus.
- (4) Change the receiving signal to white pattern and blue back.
- (5) Confirm MAGENTA RING should not be over the limit sample. In case MAGENTA RING is over the limit sample, adjust FOCUS VR to take tracking of MAGENTA RING and FOCUS.



### 4-4. NECK ASSY TWIST ADJUSTMENT

- (1) Receive dot/hatch pattern.
- (2) Turn FOCUS VR fully counter-clockwise.
- (3) Confirm the dot shape at the screen center. (Fig. 4-4)
- (4) Resume FOCUS VR.

#### Note

In case of turning NECK ASSY, loosen the screw 3 turns. Do not move the position.

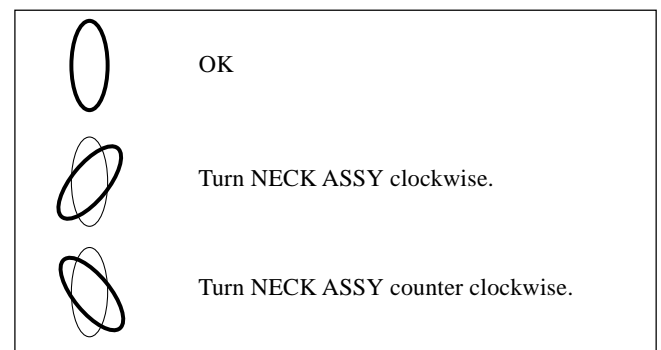
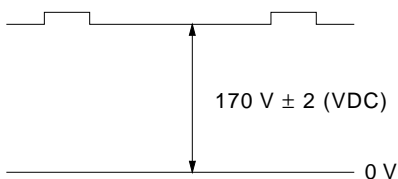


Fig. 4-4

## 4-5. G2 (SCREEN) AND WHITE BALANCE ADJUSTMENTS

### 1. G2 (SCREEN) ADJUSTMENT

- 1) Set the PICTURE and BRIGHTNESS to normal.
- 2) Put to VIDEO input mode without signals.
- 3) Connect R, G and B of the C board cathode to the oscilloscope.
- 4) Adjust BRIGHTNESS to obtain the cathode voltage to the value below.
- 5) Whilst watching the picture, adjust the screen VR (RV9002) located on the C board to the point just before the flyback return lines disappear (to the point before cut-off).



### 2. WHITE BALANCE ADJUSTMENT

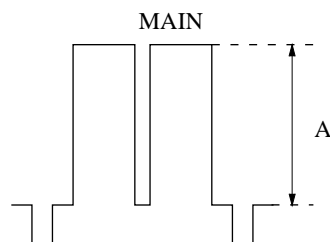
- 1) Set to Service Mode (Refer Section 5-1: ADJUSTMENTS WITH COMMANDER).
- 2) Input white raster signal.
- 3) Set the following condition.  
PICTURE minimum, BRIGHTNESS 50%
- 4) Select GCT (WHB 7) and BCT (WHB 8) with [1] and [4], and adjust the level with [3] and [6] for the best white balance.
- 5) Set the PICTURE to maximum.
- 6) Select GDR (WHB 4) and BDR (WHB 5) with [1] and [4], and adjust the level with [3] and [6] for the best white balance.
- 7) Write into the memory by pressing [MUTING] then [0].

### 3. SUB PICTURE BRIGHTNESS ADJUSTMENT

- 1) Tune RF PAL white signal at program No. 1 and No. 2.
- 2) Select "TWIN PICTURE" mode.
- 3) Receive different RF PAL white signals in MAIN and Sub picture.
- 4) Adjust RV3300 on A PWB, so that the output from the 17 pin and 20 pin of the CN1180 becomes within the spec.

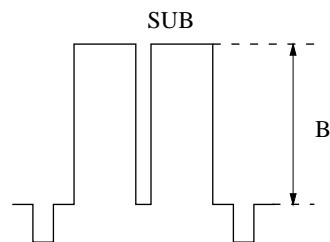
#### CVBS 1

17 pin



#### CVBS 2

20 pin



Spec:  $|A - B| \leq \pm 20\text{mV}$

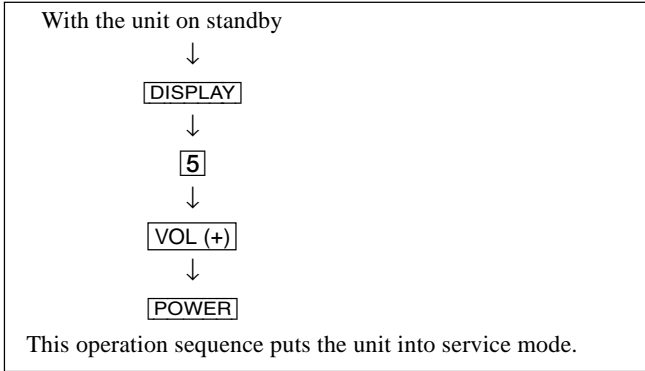
# SECTION 5

## CIRCUIT ADJUSTMENTS

### 5-1. ADJUSTMENTS WITH COMMANDER

Service adjustments are made with the RM-916 that comes with this unit.

#### a. ENTERING SERVICE MODE



#### b. METHOD OF CANCELLATION FROM SERVICE MODE

Set the standby condition (Press **POWER** button on the commander), then press **POWER** button again, hereupon it becomes TV mode.

#### c. METHOD OF WRITE INTO MEMORY

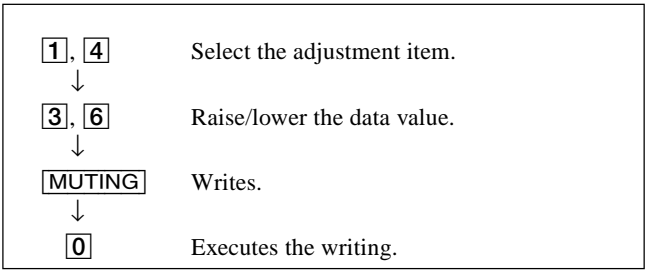
- 1) Set to Service Mode.
- 2) Press **1** (UP) and **4** (DOWN), select an item of adjustment.
- 3) Press **MUTING** button and it will indicate WRITE on the screen.
- 4) Press **0** button to write into memory.

#### d. MEMORY WRITE CONFIRMATION METHOD

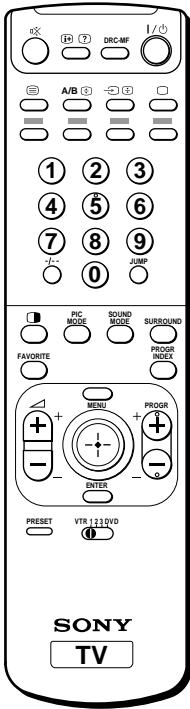
- 1) After adjustment, pull out the plug from AC outlet, and then plug into AC outlet again.
- 2) Turn the power switch ON and set to Service Mode.
- 3) Call the adjusted items again to confirm adjustments were made.

The screen display is :

Device Name	Item Name	Item No	Data	Marking of virgin NVM	Mode	
GEO		00	VSZ	29	■	SERVICE ■ 50
0	013Q/018Q	1.2M	59	FF	000A	
	Suffix No (OEM Code)	Software version	Total Power-On time (hours)			



- 7, 0** All the data becomes the values in memory.
- 8, 0** All user control goes to the standard state.
- 5, 0** Service data initialization (Be sure not to use usually.)
- DISPLAY, 0** Write 50Hz adjustment data to 60Hz, or vice versa.
- 2, 0** Copy and write all data.



RM-916

5-2. ADJUSTMENT METHOD

Item Number 00 of device GEO

This explanation uses H-Position as an example.

- 1. Select “GEO 00 VSZ” with the [1] and [4] buttons.
- 2. Raise/lower the data with the [3] and [6] buttons.
- 3. Select the optimum state. (The standard is 1F for PAL reception.)
- 4. Write with the [MUTING] button. (The display changes to WRITE.)
- 5. Execute the writing with the [0] button. (The WRITE display will be changed to red color while excuting, and back to SERVICE.)

GEO00HPS29SERVICE50  
0013Q1.2M59FF0000A  
or  
018Q

Adjusted with [3] and [6] buttons.

GREEN

GEO00HPS1FWRITE50  
0013Q1.2M59FF0000A  
or  
018Q

Written with [MUTING]

GREEN

GEO00HPS1FSERVICE50  
0013Q1.2M59FF0000A  
or  
018Q

Write executed with [0]

RED  
The WRITE display then the display returns to a green SERVICE.

Use the same method for all Items. Use [1] and [4] to select the adjustment item, use [3] and [6] to adjust, write with [MUTING], then execute the write with [0].

- Note :**
- 1. In [WRITE], the data for all items are written into memory together.
  - 2. For adjustment items that have different standard data between 50Hz or 60Hz, be sure to use the respective input signal after adjustment.
  - 3. Additional function to skip category (device) to category (device).  
example:  
GEO 00 HPS  
↕  
DAC 00 XXX  
The buttons for the function above should be cursor +/-.

**Adjustment Item Table**

Category	Functionality		Initial Data	Range	Function	Table & Note	Register (Bit Range)	Device & Slave Address	RAM Address (Bit Range)
	No.	Name							
GEO	00	VSZ	21	3F	V SIZE	FF/R4/PR*50/60*VC/NC, TW/IX	11 (7-2)	CXA2100AQ (86H)	369 (7-2)
	01	VPS	27	3F	V POSITION	FF/R4/PR*50/60*VC/NC, TW/IX	12 (7-2)		354 (7-2)
	02	VLN	5	0F	V LINEARITY	FF/R4/PR*50/60*VC/NC	13 (7-4)		95 (3-0)
	03	SCO	0A	0F	S CORRECTION	FF/R4/PR*50/60*VC/NC	13 (3-0)		95 (7-4)
	04	HSZ	1E	3F	H SIZE	FF/R4/PR*50/60*VC/NC, TW/IX	14 (7-2)		36A (7-2)
	05	HPS	2F	3F	H POSITION	FF/R4/PR*50/60*VC/NC, TW/IX	19 (7-2)		355 (7-2)
	06	PAP	28	3F	PIN AMP	FF/R4/PR*50/60*VC/NC	15 (7-2)		98 (7-2)
	07	UPN	25	3F	UPPER CORNER PIN	FF/R4/PR*50/60*VC/NC	16 (7-2)		99 (7-2)
	08	LPN	23	3F	LOWER CORNER PIN	FF/R4/PR*50/60*VC/NC	17 (7-2)		9D (7-2)
	09	TRZ	0C	0F	TRAPEZIUM	FF/R4/PR*50/60*VC/NC, TW/IX	18 (7-4)		36B (7-4)
	0A	AGL	0A	0F	AFC ANGLE	FF/R4/PR*50/60*VC/NC	1A (3-0)		9B (3-0)
	0B	BOW	6	0F	AFC BOW	FF/R4/PR*50/60*VC/NC	1A (7-4)		9B (7-4)
	0C	LBL	12	3F	LEFT H BLANKING	FF/R4/PR*50/60*VC/NC, TW/IX	1B (7-2)		9C (7-4)
	0D	RBL	2C	3F	RIGHT H BLANKING	FF/R4/PR*50/60*VC/NC, TW/IX	1C (7-2)		9C (3-0)
	0E	MPN	0	3	MIDDLE PIN DISTORTION COMPENSATION	50/60*VC/NC	16 (1-0)		
	0F	UVL	0	0F	UPPER V LINEARITY	50/60Hz	1F (7-4)		
	10	LVL	0	0F	LOWER V LINEARITY	50/60Hz	1F (3-0)		
	11	HCP	0	3	HORIZONTAL HIGH VOLTAGE COMPENSATION	50/60*VC/NC	15 (1-0)		
	12	VCP	1	3	VERTICAL HIGH VOLTAGE COMPENSATION	50/60*VC/NC	12 (1-0)		
	13	VAS	2F	3F	V ASPECT	50/60*VC/NC	1D (7-2)		
DAC	14	VSC	1F	3F	V SCROLL	50/60Hz	1E (7-2)	MB88141 (96H)	
	15	USC	0	1	UNDER-SCAN MODE ON/OFF	50/60*VC/NC	1D (0)		
	16	VBW	0	3	V BLANKING WIDTH CONTROL	FF/R4/PR*50/60*VC/NC	19 (1-0)		6D (1)
	17	AT1	2	3	AKB REFERENCE TIMING	FF/R4/PR*50/60*VC/NC	1E (1-0)		
	00	HCT	33	FF	H CENTER	50/60Hz	CH 10 (7-0)		
	01	HLN	27	3F	H LINEARITY	FF/R4/PR*50/60*VC/NC	CH 4 (7-2)		
	02	MDP	26	3F	MIDDLE PIN	FF/R4/PR*50/60*VC/NC	CH 1 (7-2)		
	03	CCP	37	3F	LOWER CORNER PIN	FF/R4/PR*50/60*VC/NC	CH 9 (7-2)		
	04	HTR	26	3F	HORIZONTAL TRAPEZIUM	FF/R4/PR*50/60*VC/NC	CH 6 (7-2)		
	05	DF	01	1	DF ON/OFF SWITCH	FF/R4/PR*50/60*VC/NC	CH 2 (7-0)		
WHB	06	DPH	1F	3F	DF PHASE	FF/R4/PR*50/60*VC/NC	CH 3 (7-2)		
	07	QPH	19	3F	QP PHASE	FF/R4/PR*50/60*VC/NC	CH 7 (7-2)		
	08	QAC	23	3F	QP AMPLITUDE	FF/R4/PR*50/60*VC/NC	CH 8 (7-2)		
	09	QDC	20	3F	QP DC LEVEL	FF/R4/PR*50/60*VC/NC	CH 12 (7-2)		
	0A	QDV	1F	3F	QP V MODULATION	FF/R4/PR*50/60*VC/NC	CH 5 (7-2)		
	0B	QAV	1A	3F	QP AMPLITUDE MODULATION	FF/R4/PR*50/60*VC/NC	CH 11 (7-2)		
	0C	ABC	0	FF	ABL D/A CONTROL	ECO ON/OFF*VC/NC			
	00	CBO	7	0F	DC OFFSET CANCELLER FOR CB1		0F (7-4)	CXA2100AQ(86H)	106

Adjustment Item Table

Category	Functionality		Initial Data	Range	Function	Table & Note	Register (Bit Range)	Device & Slave Address	RAM Address (Bit Range)
	No.	Name							
WHB	01	CRO	7	0F	DC OFFSET CANCELLER FOR CR1		0F (3-0)	CXA2100AQ(86H)	
	02	SBR	18	3F	SUB BRIGHTNESS CONTROL		09 (7-2)		107
	03	RDR	29	3F	R DRIVE		06 (7-2)		A1 (7-2)
	04	GDR	25	3F	G DRIVE		07 (7-2)		A2 (7-2)
	05	BDR	26	3F	B DRIVE		08 (7-2)		A3 (7-2)
	06	RCT	29	3F	R CUTOFF		0A (7-2)		A5 (3-0)
	07	GCT	12	3F	G CUTOFF		0B (7-2)		A6 (7-4)
	08	BCT	31	3F	B CUTOFF		0C (7-2)		A6 (3-0)
	09	SBO	29	3F	SUB BRIGHTNESS OFFSET	PICTURE MODE EXCEPT DYNAMIC	09 (7-2)		A3 (7-2)
	0A	RDO	1F	3F	R DRIVE OFFSET	PICTURE MODE EXCEPT DYNAMIC	06 (7-2)		A5 (3-0)
	0B	GDO	1A	3F	G DRIVE OFFSET	PICTURE MODE EXCEPT DYNAMIC	07 (7-2)		A6 (7-4)
	0C	BDO	1A	3F	B DRIVE OFFSET	PICTURE MODE EXCEPT DYNAMIC	08 (7-2)		A6 (3-0)
	0D	RCO	1F	3F	R CUTOFF OFFSET	PICTURE MODE EXCEPT DYNAMIC	0A (7-2)		106
	0E	GCO	1E	3F	G CUTOFF OFFSET	PICTURE MODE EXCEPT DYNAMIC	0B (7-2)		
	0F	BCO	15	3F	B CUTOFF OFFSET	PICTURE MODE EXCEPT DYNAMIC	0C (7-2)		107
SAJ	00	PIC	3F	3F	PICTURE CONTROL	PICTURE MODE EXCEPT PERSONAL	01 (7-2)	CXA2100AQ(86H)	105
	01	BRT	1F	3F	BRIGHTNESS CONTROL	PICTURE MODE EXCEPT PERSONAL	04 (7-2)		
	02	COL	27	3F	COLOR CONTROL	PICTURE MODE EXCEPT PERSONAL	03 (7-2)		
	03	HUE	1F	3F	HUE CONTROL	PICTURE MODE EXCEPT PERSONAL	02 (7-2)		
	04	SHF	24	3F	SHARPNESS CONTROL	PICTURE MODE EXCEPT PERSONAL	05 (7-2)		
	05	VML	3	3	VM LEVEL	PICTURE MODE	09 (1-0)		105
	06	DYC	1	1	DYNAMIC COLOR ON/OFF	PICTURE MODE	00 (3)		108
	07	CTM	0	1	COLOR TEMPERATURE FOR DYNAMIC COLOR	PICTURE MODE	00 (0)		109
	08	CAX	2	3	COLOR MATRIX SPECIFICATION	50/60Hz	00 (2-1)		10A
	09	GMA	3	3	GAMMA CORRECTION	PICTURE MODE	04 (1-0)		
	0A	DCT	1	3	DC TRANSMISSION CONTROL	PICTURE MODE	0C (1-0)		
	0B	DPL	1	3	AUTO PEDESTAL LEVEL CONTROL	PICTURE MODE	0B (1-0)		
	0C	ABM	0	3	ABL MODE CONTROL	PICTURE MODE	08 (1-0)		
	0D	ABT	0	3	ABL CURRENT DETECTION VTH CONTROL	ECO ON/OFF*VC/NC	07 (1-0)		
	0E	CLO	9	0F	COLOR OFFSET	50/60*TV/VIDEO	03 (7-2)		
	0F	CLW	3	7	COLOR STEP WIDTH TO THE CHANGE OF S/N		03 (7-2)		
JGL	10	HUO	9	0F	HUE OFFSET	50/60*TV/VIDEO	02 (7-2)	CXA2100AQ(86H)	
	11	SHO	7	1F	SHARPNESS OFFSET	50/60*TV/VIDEO/DVD	05 (7-2)		
	12	SHW	1	7	SHARPNESS STEP WIDTH TO THE CHANGE OF S/N		05 (7-2)		
	13	PIO	5	7	PICTURE OFFSET FOR TWIN/INDEX	TWIN/INDEX	01 (7-2)		
	14	BRO	7	0F	BRIGHTNESS OFFSET	ECO ON/OFF*VC/NC	04 (7-2)		
	00	PON	1	1	RGB AND AKB REFERENCE PULSE OUTPUT ON/OFF		00 (7)		
	01	RGB	7	7	RGB OUTPUT SELECTION		00 (6-4)		

Adjustment Item Table

Category	Functionality		Initial Data	Range	Function	Table & Note	Register (Bit Range)	Device & Slave Address	RAM Address (Bit Range)
	No.	Name							
JGL	02	AGG	0	3	AGING MODE SELECTION		0E (1-0)	CXA2100AQ(86H)	
	03	DPS	0	1	Y/C DELAY LINE PASS MODE SWITCH		0E (3)		
	04	BBT	3	3	RGB BOTTOM LIMITER CONTROL		06 (1-0)		
	05	LML	0	3	RGB AMPLITUDE LIMITER CONTROL		01 (1-0)		
	06	PAB	0F	0F	DC LEVEL FOR PEAK ABL		0E (7-4)		
	07	SCO	0C	0F	SUB PICTURE CONTROL		0D (7-4)		
	08	LV2	7	0F	RGB LEVEL FOR RGB2		0D (3-0)		
	09	SF0	1	1	SHARPNESS CIRCUIT F0	50/60*TV/VIDEO/DVD	0E (2)		
	0A	PRO	0	3	PRE/OVER-SHOOT RATIO CONTROL	50/60*TV/VIDEO/DVD	0A (1-0)		
	0B	LTI	2	3	LUMINANCE TRANSIENT IMPROVEMENT	PICTURE MODE	05 (1-0)		
	0C	CTI	1	3	CHROMINANCE TRANSIENT IMPROVEMENT	PICTURE MODE	03 (1-0)		
YCT	00	TNT	1F	3F	TINT ADJUSTMENT FOR NTSC	TV/VIDEO	00 (5-0)	CXA2123Q(88H)	
	01	PNG	0	1	PAL/NTSC GATE WIDTH		00 (6)		
	02	PNI	0	1	PAL/NTSC SENSITIVITY SW		00 (7)		
	03	SCL	7	0F	SUB COLOR CONTROL	50/60*TV/VIDEO	01 (3-0)		
	04	SCT	8	0F	SUB CONTRAST CONTROL	50/60*TV/VIDEO	01 (7-4)		
	05	SF0	2	3	SHARPNESS CENTER FREQUENCY CHANGING		02 (1-0)		
	06	SEQ	3	3	SHARPNESS EQUALIZER CHARACTERISTIC		02 (3-2)		
	07	SHG	5	0F	SHARPNESS GAIN CONTROL	50/60*TV/VIDEO/DVD	02 (7-4)		
	08	YOL	1F	3F	Y-OUTPUT LEVEL CONTROL		03 (5-0)		
	09	BSP	0	3	BLACK STRETCH START POINT CHANGING		03 (7-6)		
	0A	COL	1F	3F	CB/CR OUTPUT LEVEL CONTROL		04 (5-0)		
	0B	DCR	0	3	DC RESTORATION RATIO ADJUSTMENT		04 (7-6)		
	0C	BF0	1	3	BPF/TQF F0 ADJUSTMENT		05 (1-0)		
	0D	BFQ	2	3	BPF/TQF Q ADJUSTMENT		05 (3-2)		
	0E	FSW	1	1	BPF/TQF SWITCH		05 (4)		
	0F	SDT	1	1	SECAM DOUBLE TRAP SWITCH		05 (6)		
	10	LPF	1	1	Y/CB/CR LPF SWITCH		05 (7)		
	11	YDL	6	0F	Y-DL TIME ADJUSTMENT	2DCOMB/3DCOMB/S-INPUT/OTHERS	06 (6-3)		
	12	CMT	0	1	CB/CR OUTPUT MUTE SWITCH		07 (7)		
	13	BO1	7	0F	CB OFFSET1 ADJUSTMENT (MAIN ROUTE)		08 (7-4)		
	14	RO1	7	0F	CR OFFSET1 ADJUSTMENT		08 (3-0)		
	15	CDF	0	7	V COUNT DOWN FREQUENCY SWITCH		0A (2-0)		
	16	CDM	0	3	V COUNT DOWN JUDGE SWITCH		0A (4-3)		
	17	AFC	0	3	AFC SENSITIVITY SWITCH	(TV/VIDEO/DVD)	0A (6-5)		
	18	MVM	0	1	MACROVISION MASK + AFC MASK		0A (7)		
	19	SRY	7	0F	SECAM R-Y BLACK ADJUSTMENT		0B (3-0)		
	1A	SBY	1	0F	SECAM B-Y BLACK ADJUSTMENT		0B (7-4)		
	1B	BEL	2	3	SECAM BELL/HPF SWITCHING		0C (1-0)		
	1C	BLF	0	1	BELL F0 ADJUSTMENT		0C (2)		
	1D	SVI	0	1	SECAM V-ID SWITCH		0C (3)		
	1E	SGP	0	3	SECAM GATE POSITION ADJUSTMENT		0C (5-4)		

Adjustment Item Table

Category	Functionality		Initial Data	Range	Function	Table & Note	Register (Bit Range)	Device & Slave Address	RAM Address (Bit Range)
	No.	Name							
YCT	1F	SID	1	1	SECAM SENSITIVITY SWITCH	EXCEPT SECAM	0C (6)	CXA2123Q(88H)	
	20	SIH	0	1	SECAM INHIBITION SWITCH		0C (7)		
	21	STP	0	1	Y BLACK LEVEL SETUP FOR PAL PLUS		0D (1)		
	22	HVC	2	3	H-VCO TEMPERATURE CHARACTER CANCELLING		0D (7-6)		
	23	3NR	1	1	3D NR OPERATION ON/OFF				
	24	BW6	1	1	3D NR FOR 60Hz NON-BUST SIGNAL ON/OFF				
	25	WSH	0	3	SHARPNESS GAIN STEP FOR NOISE REDUCTION		02 (7-4)		
	26	WCO	0	3	CB/CR OUTPUT LEVEL STEP FOR NOISE REDUCTION		04 (5-0)		
SYC	00	TNT	1F	3F	TINT ADJUSTMENT FOR NTSC	TV/VIDEO	00 (5-0)	CXA2123Q(8AH)	
	01	PNG	0	1	PAL/NTSC GATE WIDTH		00 (6)		
	02	PNI	0	1	PAL/NTSC SENSITIVITY SW		00 (7)		
	03	SCL	7	0F	SUB COLOR CONTROL		01 (3-0)		
	04	SCT	7	0F	SUB CONTRAST CONTROL		01 (7-4)		
	05	SF0	2	3	SHARPNESS CENTER FREQUENCY CHANGING		02 (1-0)		
	06	SEQ	3	3	SHARPNESS EQUALIZER CHARACTERISTIC		02 (3-2)		
	07	SHG	7	0F	SHARPNESS GAIN CONTROL		02 (7-4)		
	08	YOL	1F	3F	Y-OUTPUT LEVEL CONTROL	PAL/NTSC/SECAM/S-INPUT	03 (5-0)		
	09	BSP	0	3	BLACK STRETCH START POINT CHANGING		03 (7-6)		
	0A	COL	1F	3F	CB/CR OUTPUT LEVEL CONTROL		04 (5-0)		
	0B	DCR	0	3	DC RESTORATION RATIO ADJUSTMENT		04 (7-6)		
	0C	BF0	1	3	BPF/TQF F0 ADJUSTMENT		05 (1-0)		
	0D	BFQ	2	3	BPF/TQF Q ADJUSTMENT		05 (3-2)		
	0E	FSW	1	1	BPF/TQF SWITCH		05 (4)		
	0F	SDT	1	1	SECAM DOUBLE TRAP SWITCH		05 (6)		
	10	LPF	1	1	Y/CB/CR LPF SWITCH		05 (7)		
	11	YDL	3	0F	Y-DL TIME ADJUSTMENT		06 (6-3)		
	12	NCM	1	1	1-H ADDITION SWITCH		06 (7)		
	13	CMT	0	1	CB/CR OUTPUT MUTE SWITCH		07 (7)		
	14	BO1	7	0F	CB OFFSET1 ADJUSTMENT (MAIN ROUTE)	(TV/VIDEO/DVD)	08 (7-4)		
	15	RO1	7	0F	CR OFFSET1 ADJUSTMENT		08 (3-0)		
	16	CDF	0	7	V COUNT DOWN FREQUENCY SWITCH		0A (2-0)		
	17	CDM	0	3	V COUNT DOWN JUDGE SWITCH		0A (4-3)		
	18	AFC	0	3	AFC SENSITIVITY SWITCH		0A (6-5)		
	19	MVM	0	1	MACROVISION MASK + AFC MASK		0A (7)		
	1A	SRY	7	0F	SECAM R-Y BLACK ADJUSTMENT		0B (3-0)		
	1B	SBY	1	0F	SECAM B-Y BLACK ADJUSTMENT		0B (7-4)		
	1C	BEL	2	3	SECAM BELL/HPF SWITCHING		0C (1-0)		
	1D	BLF	0	1	BELL F0 ADJUSTMENT		0C (2)		
	1E	SVI	0	1	SECAM V-ID SWITCH		0C (3)		



**Adjustment Item Table**

Category	Functionality		Initial Data	Range	Function	Table & Note	Register (Bit Range)	Device & Slave Address	RAM Address (Bit Range)
	No.	Name							
SYC	1F	SGP	0	3	SECAM GATE POSITION ADJUSTMENT	EXCEPT SECAM	0C (5-4)	CXA2123Q(8AH)	
	20	SID	1	1	SECAM SENSITIVITY SWITCH		0C (6)		
	21	SIH	0	1	SECAM INHIBITION SWITCH		0C (7)		
	22	STP	0	1	Y BLACK LEVEL SETUP FOR PAL PLUS		0D (1)		
	23	HVC	2	3	H-VCO TEMPERATURE CHARACTER CANCELLING		0D (7-6)		
AP	00	BAS	0A	0F	BASS CONTROL	SOUND MODE EXCEPT PERSONAL	#4 (3-0)	TDA7315(80H)	358 (1-0)
	01	TRE	0A	0F	TREBLE CONTROL	SOUND MODE EXCEPT PERSONAL	#5 (3-0)		359 (1-0)
	02	LDN	1	1	LOUDNESS ON/OFF		#3 (2)		
MSP	00	WST	15	FF	W/G STEREO THRESHOLD			MSP3415D(84H)	165
	01	WBT	EA	FF	W/G BILINGUAL THRESHOLD				166
	02	WLL	5	FF	W/G MONAURAL THRESHOLD				167
	03	WAC	1	0F	W/G AGREEMENT COUNT				168
	04	WDL	30	FF	W/G SEARCH DELAY				169
	05	NDL	20	FF	NICAM SEARCH DELAY				16A
	06	SDL	10	FF	STEREO STATUS READ DELAY				16B
	07	AGC	1	1	AGC SWITCH AUTO/CONSTANT		00BB (7)		116 (7)
	08	REL	28	3F	AGC GAIN AT CONSTANT MODE		00BB (6-1)		116 (6-1)
	09	CRM	0	1	CARRIER MUTING ON/OFF		00BB (9)		115 (1)
	0A	ACO	1	1	AUDIO CLOCK ON/OFF		0083 (5)		11A (5)
	0B	FP	1B	7F	FM PRESCALE FOR NON-M SYSTEM		000E (7-0)		329
	0C	FPM	32	7F	FM PRESCALE FOR M SYSTEM		000E (7-0)		32A
	0D	FH	2D	7F	FM PRESCALE FOR HDEV		000E (7-0)		32B
	0E	FHM	65	7F	FM PRESCALE FOR HDEV AND M		000E (7-0)		32C
	0F	WGP	2A	7F	W/G PRESCALE		000E (7-0)		32D
	10	NIP	6D	7F	NICAM PRESCALE		0010 (7-0)		32E
	11	ERR	50	FF	AUTO FM SWITCH THRESHOLD		0021 (10-3)		14F
	12	VOL	6D	FF	LOUDSPEAKER GAIN 0700H TO 07FFH		0000 (11-4)		368
LTI	00	LDH	1	1	HISTOGRAM SEGMENT SELECTION	PICTURE MODE	00 (2)	TDA9178(40H)	175 (2)
	01	CFS	1	1	CONTOUR FILTER SELECTION		00 (3)		175 (3)
	02	WLB	0	1	LETTERBOX WINDOW SWITCH		00 (5)		175 (5)
	03	VDC	1	1	VIDEO DEPENDENT CORING		00 (6)		175 (6)
	04	DEM	0	1	DEMONSTRATION MODE		00 (7)		175 (7)
	05	CDP	4	07	LUMINANCE DELAY	PICTURE MODE	01 (2-0)		176 (2-0)
	06	OSP	0	1	OVERRIDE SMART PEAKING		01 (5)		176 (5)
	07	WPO	0	1	WHITE POINT STRETCH OFF		01 (4)		176 (4)
	08	DSK	0	1	SKIN TONE SWITCH		02 (0)		177 (0)
	09	ASK	0	1	SKIN TONE ANGLE SELECTION		02 (1)		177 (1)
	0A	WSK	0	1	SKIN TONE WIDTH SELECTION	PICTURE MODE & TWIN	02 (2)		177 (2)
	0B	SSK	0	1	SKIN TONE SIZE SELECTION		02 (3)		177 (3)
	0C	DGR	1	1	GREEN ENHANCEMENT SWICTH		02 (4)		A9 (4)
	0D	DGT	7	7	THRESHOLD OF GREEN ENHANCEMENT SWITCH				A9 (7-5)

Adjustment Item Table

Category	Functionality		Initial Data	Range	Function	Table & Note	Register (Bit Range)	Device & Slave Address	RAM Address (Bit Range)
	No.	Name							
LTI	0E	GGR	0	1	GREEN ENHANCEMENT GAIN	PICTURE MODE	02 (5)	TDA9178(40H)	177 (5)
	0F	WGR	0	1	GREEN ENHANCEMENT WIDTH		02 (6)		177 (6)
	10	SGR	0	1	GREEN ENHANCEMENT SIZE		02 (7)		177 (7)
	11	DBL	0	1	BLUE STRETCH SWITCH		03 (0)		178 (0)
	12	GBL	0	1	BLUE STRETCH GAIN SELECTION		03 (1)		178 (1)
	13	SBL	0	1	BLUE STRETCH SIZE SELECTION		03 (2)		178 (2)
	14	CDS	1	1	COLOR DEPENDENT SHARPNESS		03 (3)		A9 (3)
	15	CST	7	7	THRESHOLD OF COLOR DEPENDENT SHARPNESS				A9 (2-0)
	16	CTI	0	1	COLOR TRANSIENT IMPROVEMENT	PICTURE MODE	03 (4)		178 (4)
	17	BON	0	1	BLACK OFFSET COMPENSATION	PICTURE MODE	03 (5)		178 (5)
	18	BTD	0	3F	ADAPTIVE BLACK STRETCH	PICTURE MODE	04 (5-0)		179 (5-0)
	19	NLD	15	3F	NON-LINEARITY AMPLIFIER	PICTURE MODE & TWIN	05 (5-0)		AA (5-0)
	1A	NLW	7	7	STEP WIDTH OF NON-LINEARITY AMPLIFIER		05 (5-0)		AE (6-4)
	1B	VGD	15	3F	VARIABLE GAMMA	PICTURE MODE & TWIN	06 (5-0)		AB (5-0)
	1C	VGW	0	7	STEP WIDTH OF VARIABLE GAMMA		06 (5-0)		AE (2-0)
	1D	PKD	3F	3F	PEAKING AMPLITUDE	PICTURE MODE	07 (5-0)		AC (5-0)
	1E	PKW	8	0F	STEP WIDTH OF PEAKING AMPLITUDE		07 (5-0)		AF (7-4)
	1F	SPD	0	3F	STEEPNESS CORRECTION	PICTURE MODE	08 (5-0)		17D (5-0)
	20	CRD	11	3F	CORING LEVEL	PICTURE MODE	09 (5-0)		AD (5-0)
	21	CRW	9	0F	STEP WIDTH OF CORING LEVEL		09 (5-0)		AF (3-0)
	22	CRO	0	0F	CORING LEVEL OFFSET FOR VIDEO MODE		09 (5-0)		AF (3-0)
	23	LWD	1F	3F	LINE WIDTH CORRECTION		0A (5-0)		17F (5-0)
	24	SNM	0	7	S/N MODE UNDER UNREALIBLE S/N CONDITION	TV/VIDEO			B0 (2-0)
	25	SNC	3	0F	S/N RATIO AVERAGE COUNTER				B1 (3-0)
	26	FMC	2	0F	FEATURE MODE MATCHING COUNTER				B2 (3-0)
MID	00	HPH		FF	HORIZONTAL ACTIVE DISPLAY AREA PHASE			MB94918(68H)	
	01	VPH		3F	VERTICAL ACTIVE DISPLAY AREA PHASE				
	02	HSZ		FF	HORIZONTAL ACTIVE DISPLAY AREA SIZE				
	03	VSZ		FF	VERTICAL ACTIVE DISPLAY AREA SIZE				
	04	HPW		3F	DISPLAY H-SYNC PLUSE WIDTH				
	05	VPW		7	DISPLAY V-SYNC PLUSE WIDTH				
	06	YDL		3F	DISPLAY OUTPUT Y/C DELAY CORRECTION				
	07	MHP		FF	MAIN PICTURE HORIZONTAL POSITION (SINGLE & PINP)				
	08	MVP		FF	MAIN PICTURE VERTICAL POSITION (SINGLE & PINP)				
	09	MHS		FF	MAIN PICTURE HORIZONTAL SIZE (SINGLE & PINP)				
	0A	MVS		FF	MAIN PICTURE VERTICAL SIZE (SINGLE & PINP)				
	0B	PHP		FF	PINP SUB PICTURE HORIZONTAL POSITION				
	0C	PVP		FF	PINP SUB PICTURE VERTICAL POSITION				
	0D	PHS		FF	PINP SUB PICTURE HORIZONTAL SIZE				
	0E	PVS		FF	PINP SUB PICTURE VERTICAL SIZE				
	0F	PHO		FF	PINP SUB PICTURE HORIZONTAL POSITION OFFSET				
	10	PVO		FF	PINP SUB PICTURE VERTICAL POSITION OFFSET				

**Adjustment Item Table**

Category	Functionality		Initial Data	Range	Function	Table & Note	Register (Bit Range)	Device & Slave Address	RAM Address (Bit Range)
	No.	Name							
MID	11	TMP		FF	TWIN MAIN PICTURE HORIZONTAL POSITION			MB94918(68H)	
	12	TSP		FF	TWIN SUB PICTURE HORIZONTAL POSITION				
	13	TVP		FF	TWIN MAIN & SUB PICTURE VERTICAL POSITON				
	14	THS		FF	TWIN MAIN & SUB PICTURE HORIZONTAL SIZE				
	15	TVS		FF	TWIN MAIN & SUB PICTURE VERTICAL SIZE				
	16	THO		FF	TWIN MAIN & SUB PICTURE HORIZONTAL POSITION OFFSET				
	17	TVO		FF	TWIN MAIN & SUB PICTURE VERTICAL POSITION OFFSET				
	18	XHS		FF	INDEX SUB PICTURE HORIZONTAL SIZE				
	19	XVS		FF	INDEX SUB PICTURE VERTICAL SIZE				
	1A	XHG		FF	INDEX HORIZONTAL GAP WIDTH BETWEEN PICTURES				
	1B	XVG		FF	INDEX VERTICAL GAP WIDTH BETWEEN PICTURES				
	1C	XHP		FF	INDEX 1ST SUB PICTURES HORIZONTAL POSITION				
	1D	XVP		FF	INDEX 1ST SUB PICTURES VERTICAL POSITION				
	1E	DHP		FF	DRC HORIZONTAL ACTIVE AREA POSITION				
	1F	DHS		FF	DRC HORIZONTAL ACTIVE PIXEL SIZE				
	20	DVP		3F	DRC VERTICAL ACTIVE AREA LINE POSITION				
	21	DVS		FF	DRC VERTICAL ACTIVE AREA LINE SIZE				
	22	VHP		FF	VDO HORIZONTAL ACTIVE AREA POSITION				
	23	VHS		FF	VDO HORIZONTAL ACTIVE AREA PIXEL SIZE				
	24	VEP		3F	VDO VERTICAL ACTIVE AREA EVEN POSITION				
	25	VVS		FF	VDO VERTICAL ACTIVE AREA LINE SIZE				
	26	VOP		3	VDO VERTICAL ACTIVE AREA ODD POSITION				
	27	CLT		FF	VDO CLAMP PULSE OUTPUT TIMING				
	28	CLW		7	VDO CLAMP PULSE WIDTH				
	29	VYD		3F	VDO ANALOG INPUT Y/C DELAY CORRECTION				
	2A	VCR		1	VDO CROMA SIGNAL ORDER				
	2B	VDI		3	VDO DIGITAL ANALOG INPUT SELECTION				
3CM	00	FRZ	0	1	EXTERNAL MEMORY TEST BIT		02 (4)	UPD64082(B8H)	
	01	NRM	0	3	NOISE REDUCTION OPERATION MODE		00 (7-6)		
	02	YCO	0E	0F	Y/C SIGNAL OUTPUT SELECTION		00 (3-0)		
	03	SYC	1	3	SYSTEM CLOCK SELECTION		01 (7-6)		
	04	STD	0	3	STANDARD/NON-STANDARD OPERATION SELECTION		01 (5-4)		
	05	MSS	0	3	INTER-FRAME/INTER-LINE OPERATION SELECTION		01 (3-2)		
	06	KIL	3	3	KILLER/NON-KILLER OPERATION SELECTION		01 (1-0)		
	07	EAD	0	1	EXTERNAL Y-ADC SWITCH		02 (5)		
	08	ECS	1	3	EXTERNAL C-SYNC INPUT SELECTION		02 (1-0)		
	09	CPP	2	3	ADC INPUT LEVEL & CLUMP PULSE WIDTH SELECTION		03 (7-6)		
	0A	PWR	0	1	ADC INPUT WIDTH SWITCH		09 (7)		
	0B	HDP	5	7	HORIZONTAL PHASE ADJUSTMENT		03 (5-3)		
	0C	CDL	4	7	C-SIGNAL DELAY ADJUSTMENT		03 (2-0)		
	0D	DYC	2	0F	DY DETECTION CORING LEVEL ADJUSTMENT	NR MODE (0-3)	04 (7-4)		
	0E	DYG	0A	0F	DY DETECTION GAIN ADJUSTMENT	NR MODE (0-3)	04 (3-0)		


Adjustment Item Table

Category	Functionality		Initial Data	Range	Function	Table & Note	Register (Bit Range)	Device & Slave Address	RAM Address (Bit Range)
	No.	Name							
3CM	0F	DCC	5	0F	DC DETECTION CORING LEVEL ADJUSTMENT	NR MODE (0-3) NR MODE (0-3)	05 (7-4)	UPD64082(B8H)	
	10	DCG	5	0F	DC DETECTION GAIN ADJUSTMENT		05 (3-0)		
	11	YNR	1	0F	YNR NON-LINEAR FILTER SETUP		06 (7-4)		
	12	CNR	1	0F	CNR NON-LINEAR FILTER SETUP		06 (3-0)		
	13	WSC	1	3	NOISE DETECTION CORING ADJUSTMENT		08 (7-6)		
	14	VTH	1	3	HYSTERESIS SELECTION FOR H-SYNC NON-STANDARD	TV/VIDEO	08 (5-4)		
	15	VTR	1	3	SENSITIVITY SELECTION FOR H-SYNC NON-STANDARD	TV/VIDEO	08 (3-2)		
	16	LDR	2	3	SENSITIVITY SELECTION FOR FRAME-SYNC NON-STANDARD	TV/VIDEO	08 (1-0)		
	17	VAP	3	7	GAIN ADJUSTMENT FOR VERTICAL SHAPE CORRECTION	PICTURE MODE	0A (7-5)		
	18	VAI	0C	1F	VANISHING ADJUSTMENT FOR VERTICAL SHAPE CORRECTION	PICTURE MODE	0A (4-0)		
	19	TST	0	1	TEST BIT		0B (6)		
	1A	YPF	3	3	CENTER FREQUENCY SELECTION FOR Y-PEAKING BPF	PICTURE MODE	0B (5-4)		
	1B	YPG	8	0F	GAIN ADJUSTMENT FOR Y-PEAKING BPF	PICTURE MODE	0B (3-0)		
	1C	VSE	0A	0F	LINE COMB FILTER SETUP		0C (7-4)		
	1D	CCN	0	1	C-SIGNAL SPLIT FILTER SWITCH		0C (3)		
	1E	COS	0	1	C-SIGNAL DELAY SWITCH AT NOISE REDUCTION		0C (2)		
	1F	SDC	0	1	DC DETECTION SENSITIVITY SWITCH		0C (0)		
	20	SDY	1	1	DY DETECTION LOWER-LEVEL SENSITIVITY SWITCH		0D (5)		
	21	D2G	4	7	D2 GAIN SELECTION		0D (2-0)		
	22	YHC	0	3	Y-SIGNAL HIGHER-LEVEL CORING SELECTION	PICTURE MODE	10 (7-6)		
	23	YHG	0	1	Y-SIGNAL HIGHER-LEVEL GAIN SWITCH	PICTURE MODE	10 (5)		
	24	SHT	0	0F	NON-STANDARD DETECTION & H/V COUNTER TEST BITS		11 (7-4)		
	25	CLK	8	0F	CLOCK TEST BITS		11 (3-0)		
	26	PLL	0D	0F	PLL FILTER SETUP		12 (7-4)		
	27	KRF	3	0F	KILLER DETECTION REFERENCE ADJUSTMENT		12 (3-0)		
	28	HSL	0C	0F	H-SYNC SLICE LEVEL ADJUSTMENT		13 (7-4)		
	29	VSL	8	0F	V-SYNC SLICE LEVEL ADJUSTMENT		13 (3-0)		
	2A	BPS	4	0F	INTERNAL BURST GATE START POSITION ADJUSTMENT		14 (7-4)		
	2B	BPW	0A	0F	INTERNAL BURST GATE WIDTH ADJUSTMENT		14 (3-0)		
	2C	ADC	3	3	ADC CLOCK DELAY SELECTION		15 (7-6)		
	2D	APD	1	1	ADC POWER-DOWN SWITCH		15 (5)		
	2E	NSD	1	1	NON-STANDARD DETECTION TEST BIT		15 (4)		322
	2F	SPD	2	3	MEMORY POWER-DOWN SWITCH		16 (7)		323
	30	CNT	0	1	CNR TEST BIT		17 (7)		324
2CM	00	APA	1	1	2D COMB APACON ON/OFF	PICTURE MODE	#2 (2-1)	CXA2069Q(90H)	
DSP	00	DUL	0	3	DIR UNLOCK DETECTION MODE			TC9446F(3AH)	
	01	DIM	3	3	DIGITAL INPUT MODE				
	02	TFM	5A	7F	TRUSURROUND FRONT MINUS	VDD/VDP	2764/276D		
	03	TFP	12	7F	TRUSURROUND FRONT PLUS	VDD/VDP	2765/276E		
	04	TCE	40	7F	TRUSURROUND CENTER	VDD/VDP	2766/276F		
	05	TS1	20	FF	TRUSURROUND SURROUND #1	VDD/VDP	2767		
	06	TS2	20	7F	TRUSURROUND SURROUND #2	VDD/VDP	2770		

**Adjustment Item Table**

Category	Functionality		Initial Data	Range	Function	Table & Note	Register (Bit Range)	Device & Slave Address	RAM Address (Bit Range)
	No.	Name							
DSP	07	TSP	68	7F	TRUSURROUND SURROUND PLUS	VDD/VDP	2768/2771	TC9446F(3AH)	31E
	08	TEM	68	7F	TRUSURROUND SURROUND MINUS	VDD/VDP	2769/2772		
	09	LFE	5A	7F	LOW FREQUENCY EFFECT		276A/2773		
	0A	BHL	40	7F	BBE EFFECT 1 FOR BBE HIGH	VDD/VDP/TRS/SIM/OFF	278F		
	0B	BHH	48	7F	BBE EFFECT 2 FOR BBE HIGH	VDD/VDP/TRS/SIM/OFF	2790		
	0C	BLL	33	7F	BBE EFFECT 1 FOR BBE LOW	VDD/VDP/TRS/SIM/OFF	278F		
	0D	BLH	33	7F	BBE EFFECT 2 FOR BBE LOW	VDD/VDP/TRS/SIM/OFF	2790		
	0E	DLR	7	7	DELAY SELECTION AT DSP RESET				
	0F	BBE	1	3	BBE SELECTION	SOUND MODE EXCEPT PERSONAL			
DYC	00	SBH	1F	3F	H STATIC CONV1	50/60Hz	0D (5-0)	CXA8070P(DEH)	
	01	YBU	1F	3F	H STATIC CONV2 UPPER	50/60Hz	0B (5-0)		
	02	YBL	1F	3F	H STATIC CONV2 LOWER	50/60Hz	0C (5-0)		
	03	RSA	1F	3F	H DYNAMIC CONV1 LEFT	50/60Hz	05 (5-0)		
	04	LSA	1F	3F	H DYNAMIC CONV1 RIGHT	50/60Hz	0A (5-0)		
	05	LUB	1F	3F	H DYNAMIC CONV2 TOP LEFT	50/60Hz	01 (5-0)		
	06	LLB	1F	3F	H DYNAMIC CONV2 BOTTOM LEFT	50/60Hz	02 (5-0)		
	07	RUB	1F	3F	H DYNAMIC CONV2 TOP RIGHT	50/60Hz	06 (5-0)		
	08	RLB	1F	3F	H DYNAMIC CONV2 BOTTOM RIGHT	50/60Hz	07 (5-0)		
TXT	00	TXH	4B	FF	TELETEXT HORIZONTAL POSITION		99 (7-0)	SAA5261(58H)	352 (1-0)
	01	TXV	0E	3F	TELETEXT VERTICAL POSITION		9A (5-0)		352 (5-4)
OPM	00	OSH	12	3F	OSD H POSITION		1F1	CXP750096(60H) OPTION-MISC	18D (7-2)
	01	FW1	0	3F	OSD ODD/EVEN FIELD WINDOW SETUP #1		1F9		
	02	FW2	3	3F	OSD ODD/EVEN FIELD WINDOW SETUP #2		1F9		
	03	OHO	9	0F	OSD H POSITION OFFSET FOR INDEX		1F1		
	04	ICO	1	3	INDEX "VIDEO" OSD HORIZONTAL OFFSET (12+1 INDEX)			1F2 1F2/1F3	347 (7-6) 346 (5) 346 (4-3) 346 (0) 346 (1) 347 (2-0) 346 (2) 346 (5) 18E (5-0) 18E (5-0)
	05	ISO	2	3	INDEX SUB-SCREEN OSD HORIZONTAL OFFSET				
	06	IL1	1C	3F	INDEX SUB-SCREEN OSD 1ST LINE VERTICAL POSITION	50/60Hz			
	07	IVO	2F	3F	INDEX SUB-SCREEN OSD VERTICAL OFFSET	50/60Hz			
	08	COM	0	03	COMB OPERATION SELECTION				
	09	APC	1	1	APC SWITCH				
	0A	TSY	0	03	TV SYSTEM SELECTION UNDER SEARCHING WITH AUTO TV SYSTEM				
	0B	MUT	0	1	NO SIGNAL MUTE				
	0C	AFM	1	1	AUTO FM SWITCH				
	0D	TVO	3	7	V-ANGLE CORRECTION TO PICTURE ROTATION				
	0E	DBL	0	1	DISABLE BLUEBACK FUNCTION				
	0F	SSO	1	3	SPEED CH SEARCH SELECTION				
	10	TRP	0	3F	MPEG/JPEG NOISE REDUCTION FOR EACH INPUT				
	00	SCH	1	7F	CH SELECTION FOR SHIPPING CONDITION	NTSC ONLY			
	10	SCA	1	1	CABLE/AIR SELECTION FOR SHIPPING CONDITION	NTSC ONLY			
OPB	00	OP1	E7	FF	OPTIONAL BITS 1 (SEE THE SPECIFIED SHEET)			OPTION-BITS	4A
	01	OP2	13	FF	OPTIONAL BITS 2 (SEE THE SPECIFIED SHEET)				4B

**NOTE**

-  shaded items are fixed data.
- Standard data listed on the Adjustment Item Table are reference values, therefore it may be different for each model and for each mode.
- Note for Different Data: Those are the standard data values written on the microprocessor. Therefore, the data values of the modes and stored respectively in the memory.

In case of a device replacement, adjustment by rewriting the data value is necessary for some items.

**OPTION NOTE**

**COM** Comb Operation Selection

00 = automatic operation (depends on color system status),  
 01 = no comb operation,  
 02 = forced 2D-comb operation,  
 03 = forced 3D-comb operation

**TSY** TV System Selection for Auto TV System

00 = B/G, 01 = I, 10 = D/K, 11 = M

**SSO** Speed CH Search Selection

00 = normal, 01 = 4 times, 10 = 6 times, 11 = 8 times

**TRP** MPEG/JPEG Noise Reduction

Input	–	–	TV	Video 1	Video 2	Video 3	Video 4	DVD
-------	---	---	----	---------	---------	---------	---------	-----

**OP1 Items**

Item	TOP	NICAM	HDEV	Reserved	–	DVD Input	AV Input	
<b>KV-ES34M31</b>	1	1	1	0	0	1	1	1
<b>KV-ES34M61</b>	1	1	1	0	0	1	1	1
<b>KV-ES34M80</b>	1	1	1	0	0	1	1	1
<b>KV-ES34M90</b>	1	1	1	0	0	1	1	1

**AV Input** 00 = no AV Input, 01 = 1 AV Input, 10 = 3 AV Input, 11 = 4 AV Input

**OP2 Items**

Item	C-Text	Korean Stereo	Korean Mode	A-TVsys	US ST	SSV Model	OSD	Language
<b>KV-ES34M31</b>	0	0	0	1	0	0	1	1
<b>KV-ES34M61</b>	0	0	0	1	0	0	1	1
<b>KV-ES34M80</b>	0	0	0	0	0	0	1	1
<b>KV-ES34M90</b>	0	0	0	0	0	0	1	1

### 5-3. PICTURE QUALITY ADJUSTMENTS

#### -H-TRAPIZIUM ADJUSTMENT

1. Input a cross hatch/dot signal.
2. Adjust DAC 4 HTR to make H-Trapezoid distortion best.

#### SUB CONTRAST, SUB HUE, SUB COLOR

Adjustment condition

SAJ 00 PIC 3F  
06 DYC 0  
0E CLO 7  
10 HUO 7  
13 PIO 0

JGL 04 BBT 0  
05 LML 3

PICTURE QUALITY : HI-FINE  
ECO MODE : OFF  
WIDE MODE : OFF  
DRC-MF : DRC1250

INPUT SIGNAL

Video Color Bar (White and Color 75%)  
RF Color Bar (White and Color 75%)

MEASUREMENT POINT

VR ; R100 (the pin 6 of CN1100 at A board)  
VB ; B100 (the pin 7 of CN1100 at A board)

CAUTION

After the above Adjustments, these adjustment parameters must be recovered to the original condition.

Original condition

SAJ 00 PIC 28 HI-FINE  
SAJ 06 DYC 0 HI-FINE

	50 TV	50 VIDEO	60 TV	60 VIDEO
OE CLO	9	8	9	9
10 HUO	8	8	9	9

13 PIO TWIN = 5  
JGL 04 BBT 3  
05 LML 0

#### 1. NTSC VIDEO INPUT

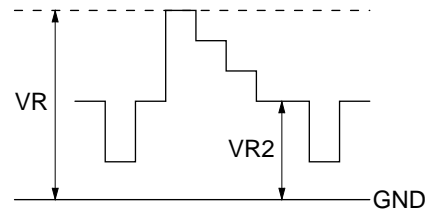
Input signal ; NTSC color bar, 75% to Video 1.  
[TWIN] mode, [Service] mode.

(i) SUB CONTRAST

Condition : SAJ 00 PIC 3F  
02 COL 0  
JGL 01 RGB 4  
SAJ 13 PIO 0

Adjusting parameter:

LEFT ; YCT 08 YOL  
RIGHT ; SYC 08 YOL



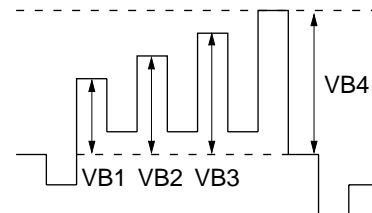
$$VR1 - VR2 = VR = 1.88 \pm 0.07 (V_{p-p})$$

(ii) SUB HUE/SUB COL

Condition : SAJ 02 COL 1F  
JGL 01 RGB 7  
SAJ 10 HUO 7

Adjusting parameter:

LEFT ; YCT 0A COL  
YCT 00 TNT  
RIGHT ; SYC 0A COL  
SYC 00 TNT



$$VB1 = VB4 \pm 50 \text{ mV}$$

$$VB2 = VB3 \pm 50 \text{ mV}$$

## 2. NTSC RF INPUT

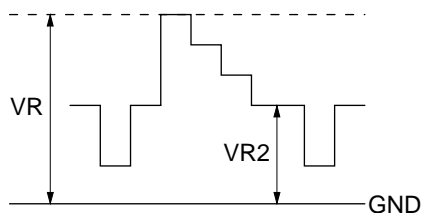
Input signal ; NTSC RF color bar, 75%.  
 [TWIN] mode, [Service] mode.

### (i) SUB CONTRAST

Condition :   SAJ   00    PIC   3F  
                   02    COL   0  
               JGL   01    RGB   4

Adjusting parameter:

LEFT   ;   YCT   04   SCT  
 RIGHT ;   SYC   04   SCT



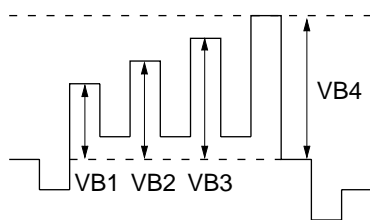
$$VR1 - VR2 = VR = 1.88 \pm 0.07 (V_{p-p})$$

### (ii) SUB HUE/SUB COL

Condition :   SAJ   02    COL   1F  
               JGL   01    RGB   7  
               SAJ   10    HUO   7

Adjusting parameter:

LEFT   ;   YCT   03   SCL  
               YCT   00   TNT  
 RIGHT ;   SYC   03   SCL  
               SYC   00   TNT



$$VB1 = VB4 \pm 50 \text{ mV}$$

$$VB2 = VB3 \pm 50 \text{ mV}$$

## 3. PAL VIDEO INPUT

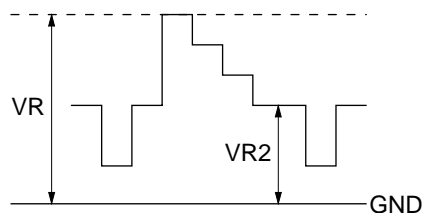
Input signal ; PAL color bar, 75% to Video 1.  
 [TWIN] mode, [Service] mode.

### (i) SUB CONTRAST

Condition :   SAT   00    PIC   3F  
                   SAT   02    COL   0  
               JGL   01    RGB   4

Adjusting parameter:

LEFT   ;   YCT   04   SCT  
 RIGHT ;   SYC   04   SCT



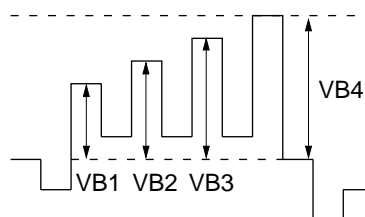
$$VR1 - VR2 = VR = 1.88 \pm 0.07 (V_{p-p})$$

### (ii) SUB HUE/SUB COL

Condition :   SAJ   02    COL   1F  
               JGL   01    RGB   7

Adjusting parameter:

LEFT   ;   YCT   03   SCL  
                   SAJ   10   HUO  
 RIGHT ;   SYC   03   SCL



$$VB1 = VB4 \pm 50 \text{ mV}$$

$$VB2 = VB3 \pm 50 \text{ mV}$$



**4. PAL RF INPUT**

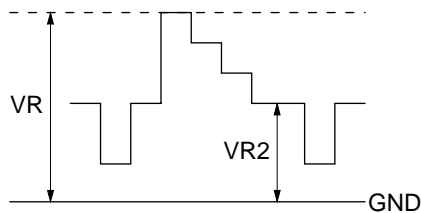
Input signal ; PAL RF color bar, 75%.  
[TWIN] mode, [Service] mode.

**(i) SUB CONTRAST**

Condition :   SAJ   00    PIC   3F  
              SAJ   02    COL   0  
              JGL   01    RGB   4

Adjusting parameter:

LEFT   ;   YCT   04    SCT  
RIGHT  ;   SYC   04    SCT



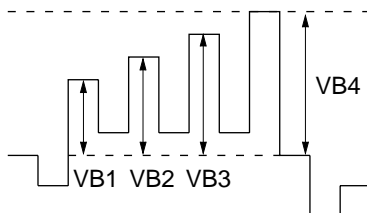
$$VR1 - VR2 = VR = 1.88 \pm 0.07 (V_{p-p})$$

**(ii) SUB HUE/SUB COL**

Condition :   SAJ   02    COL   1F  
              JGL   01    RGB   7

Adjusting parameter:

LEFT   ;   YCT   03    SCL  
              SAJ   10    HUO  
RIGHT  ;   SYC   03    SCL



$$VB1 = VB4 \pm 50 \text{ mV}$$

$$VB2 = VB3 \pm 50 \text{ mV}$$

**5-4. DEFLECTION ADJUSTMENTS****FOR DRC 1250**

1. Set to Service Mode.
2. Input a Pal cross hatch/dot signal.
3. Set the following condition.  
Picture Mode to **[DYNAMIC]**, Picture Rotation to **[+/- 0]** and Eco Mode to OFF.
4. Set to DRC 1250 mode.
5. Using the **[1]** and **[4]** buttons select category GEO (Service Mode).
6. Select and adjust the following items to obtain optimum image.  
Raise/lower the data with the **[3]** and **[6]** buttons.

1	00	VSZ	V SIZE
2	04	HSZ	H SIZE
3	01	VPS	V POSITION
4	05	HPS	H POSITION
5	03	SCO	S CORRECTION
6	02	VLN	V LINEARITY
7	0B	BOW	AFC BOW
8	06	PAP	PIN AMP
9	07	UPN	UPPER CORNER PIN
10	08	LPN	LOWER CORNER PIN
11	09	TRZ	TRAPEZIUM

7. Using the **[1]** and **[4]** buttons select category DAC (Service Mode).
8. Select and ad List the following items to obtain optimum image.  
Raise/lower the data with the **[3]** and **[6]** buttons.

1	01	HLN	H LINEARITY
2	00	HCT	H CENTER

9. Select "GEO 04 HSZ" with the **[1]** and **[4]** buttons.
10. Confirm the H Size condition. If necessary, adjust the H SIZE to get a best condition.
11. Write into the memory by pressing **[MUTING]** then **[0]**.

#### FOR DRC 100 MODE

12. Set to DRC 100 mode.
13. Repeat Step 5, Step 6 and Step 7.
14. Write “DAC 00 HCT DRC 100 Mode” as “DAC 00 HCT DRC 1250 Mode”.
- Write “DAC 01 HLN DRC 100 Mode” as “DAC 01 HLN DRC 1250 Mode”.

#### FOR PIP MODE

15. Set to PIP mode.
16. Repeat Step 5 and Step 6.
17. Write into the memory by pressing **[MUTING]** then **[0]**.

#### FOR TWIN MODE

18. Set to TWIN Mode.
19. Using the **[1]** and **[4]** buttons select category GEO (Service Mode).
20. Select and adjust the following items to obtain optimum image.  
 Raise/lower the data with the **[3]** and **[6]** buttons.

1	01	VPS	V POSITION
2	05	HPS	H POSITION
3	06	PAP	PIN AMP
4	09	TRZ	TRAPEZIUM

21. Write into the memory by pressing **[MUTING]** then **[0]**.

#### FOR INDEX MODE

22. Set to Index Mode.
23. Repeat Step 5 and Step 6.
24. Write into the memory by pressing **[MUTING]** then **[0]**.

#### FOR WIDE MODE

25. Set to WIDE Mode.
26. Using the **[1]** and **[4]** buttons select category GEO (Service Mode).
27. Select and adjust the following items to obtain optimum image.  
 Raise/lower the data with the **[3]** and **[6]** buttons.

1	00	VSZ	V SIZE
2	01	VPS	V POSITION
3	05	HPS	H POSITION
4	06	PAP	PIN AMP
5	09	TRZ	TRAPEZIUM

28. Input a NTSC cross hatch/dot signal and repeat all above steps.

### 5-5. A BOARD ADJUSTMENT AFTER IC003 (MEMORY) REPLACEMENT

When replacing IC003 and IC004 (MEMORY), be sure to change IC001 (μ-COM) to the following new IC at the same time.

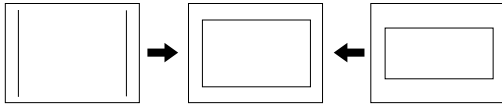
MODEL	IC001 (μ-CON)
KV-ES34M31/M61/M80/M90	CXP750096-012Q

1. Enter to Service Mode.
2. Press commander buttons **[5]** and **[0]** (Data Initialize), and **[2]** and **[0]** (Data Copy) to initialize the data.
3. Call each item number and check if the respective screen shows the normal picture.  
 In cases where items are not well adjusted, rectify the items with fine adjustment.  
 Write the data per each item number (**[MUTING]** + **[0]**).
4. Select item numbers “OPB0” (OP1), “OPB1” (OP2) and respectively set the bit per model with command buttons **[3]** and **[6]**.
5. Press commander buttons **[8]** and **[0]** (Test Normal) to return to the data that was set on the shipment from the factory.  
 (This will also cancel Service Mode.)

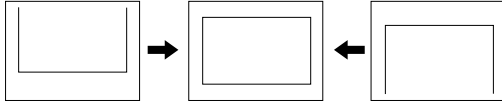
## 5-6. PICTURE DISTORTION ADJUSTMENT (1)

Item Number 00 – 0B

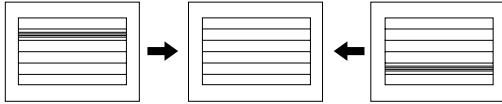
GEO 0 VSZ (V SIZE)



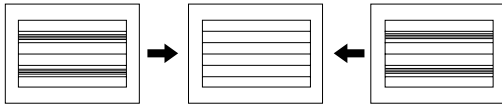
GEO 1 VPS (V POSITION)



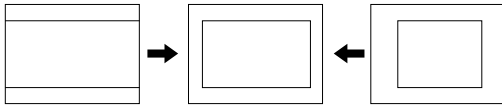
GEO 2 VLN (V LINEARITY)



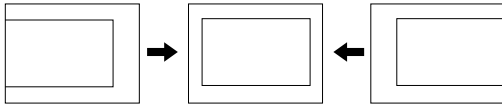
GEO 3 SCO (VERTICAL S-Correction)



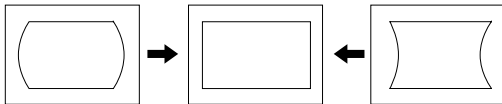
GEO 4 HSZ (H SIZE)



GEO 5 HPS (H POSITION)

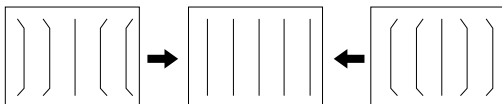


GEO 6 PAP (PIN AMP)

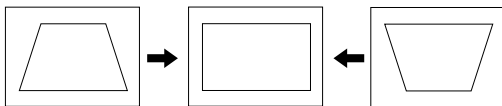


GEO 07 UPN (UPPER CORNER PIN)

GEO 08 LPN (LOWER CORNER PIN)



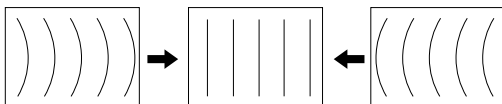
GEO 9 TRZ (TRAPEZIUM)



GEO 0A AGL (AFC.ANGLE)

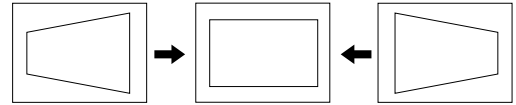


GEO 0B BOW (AFC.BOW)



## PICTURE DISTORTION ADJUSTMENT (2)

H-TRAPEZOID (DAC 4 HTR)

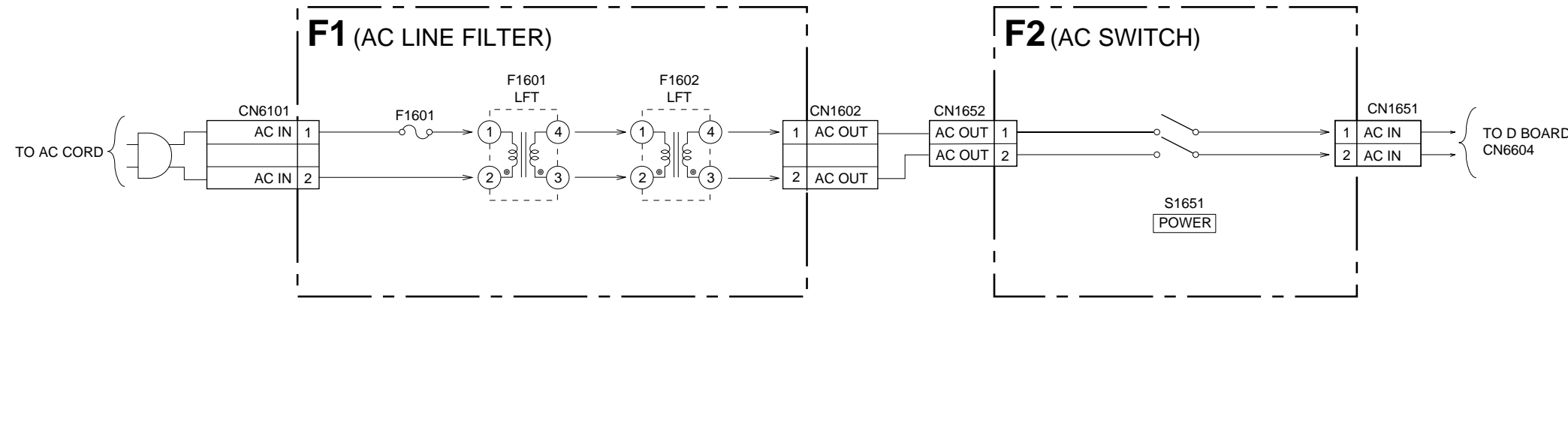
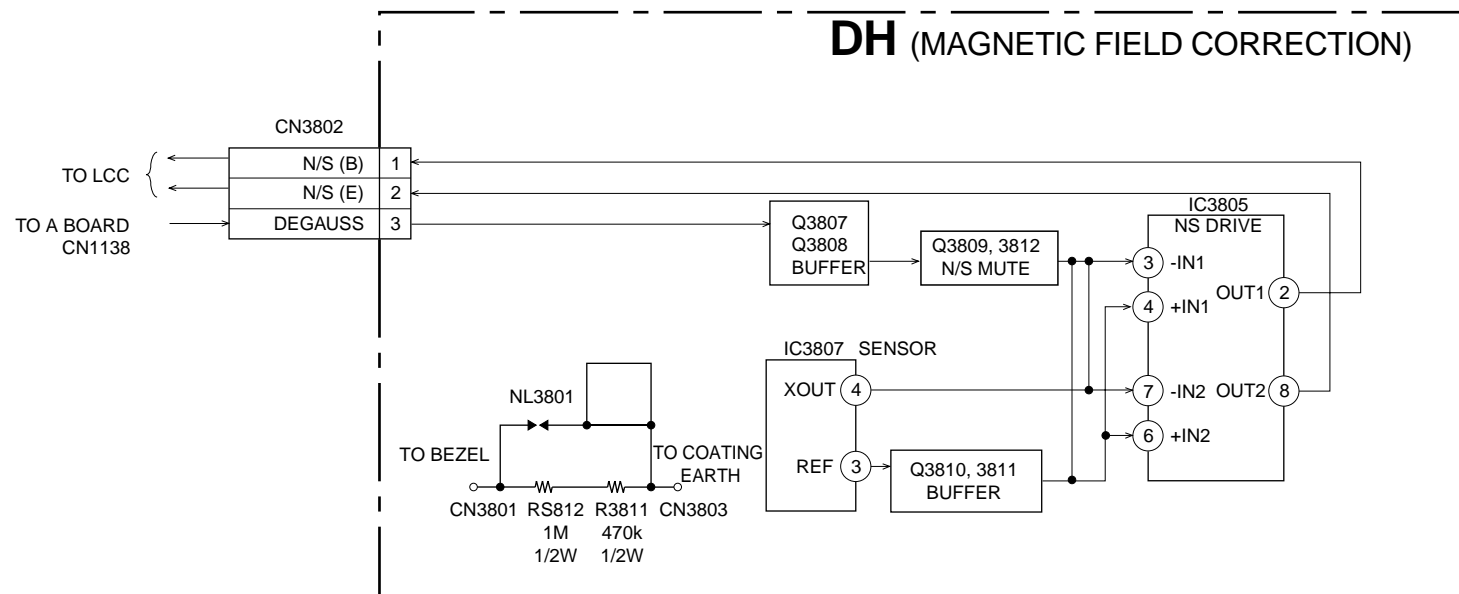
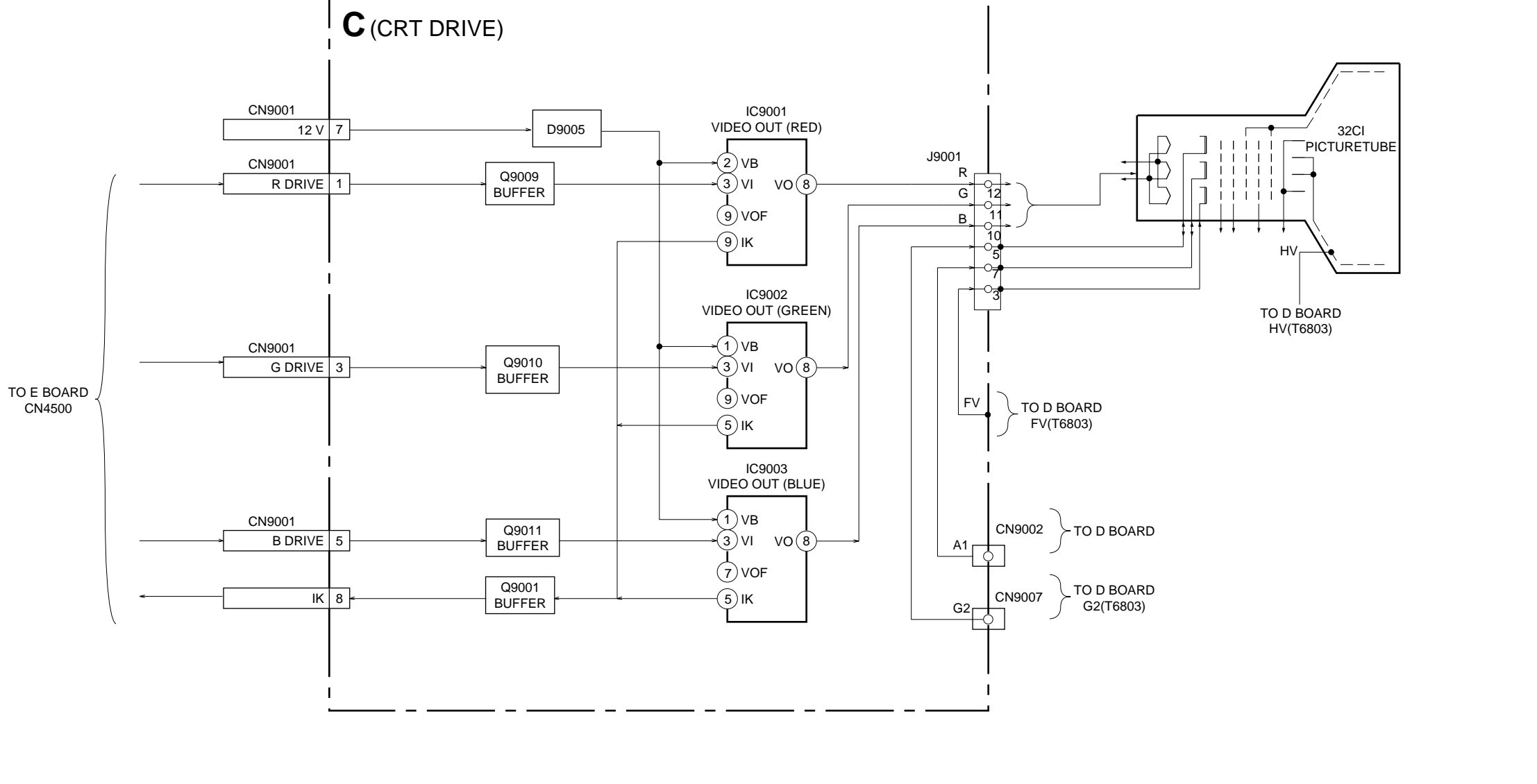
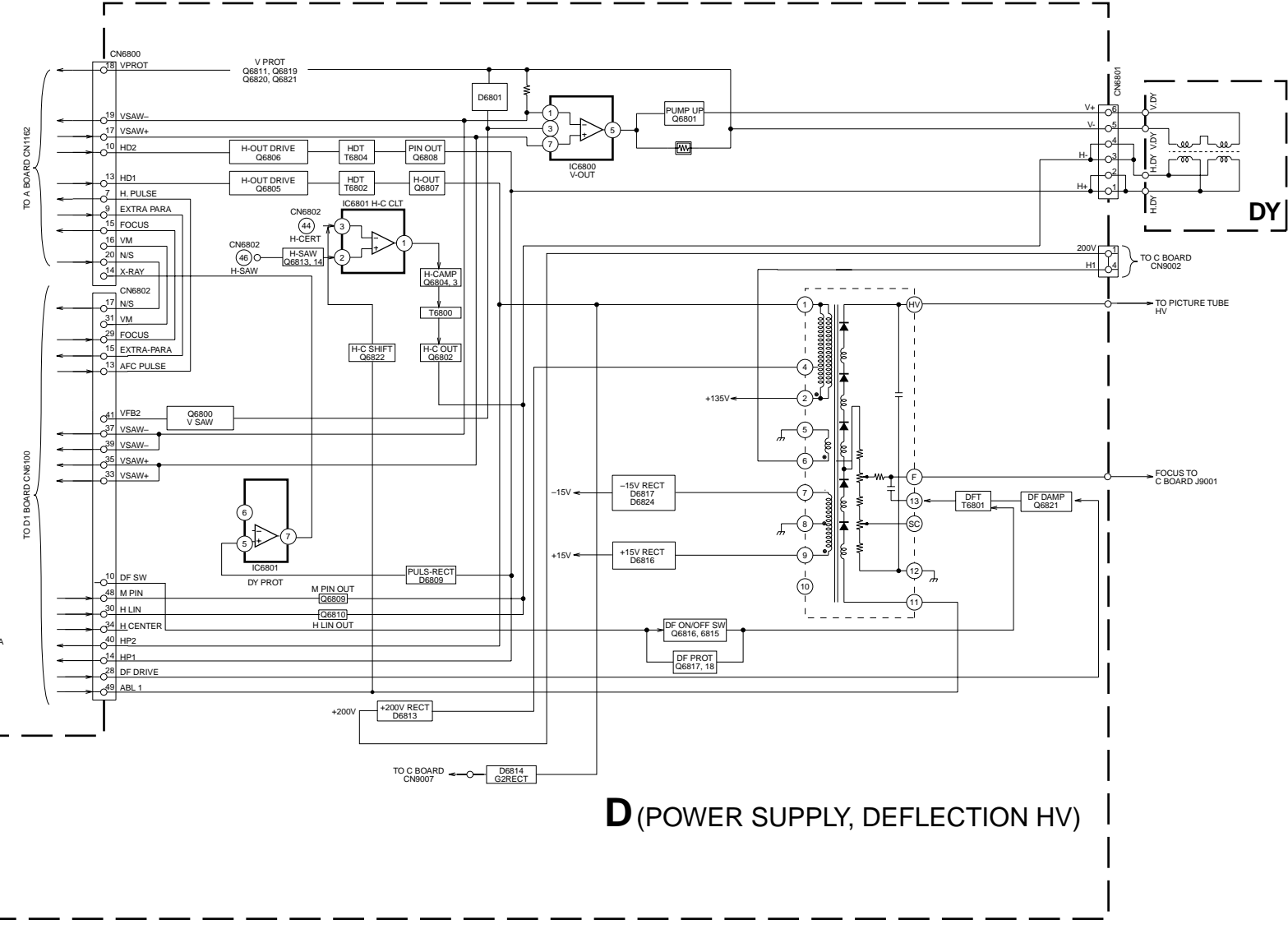
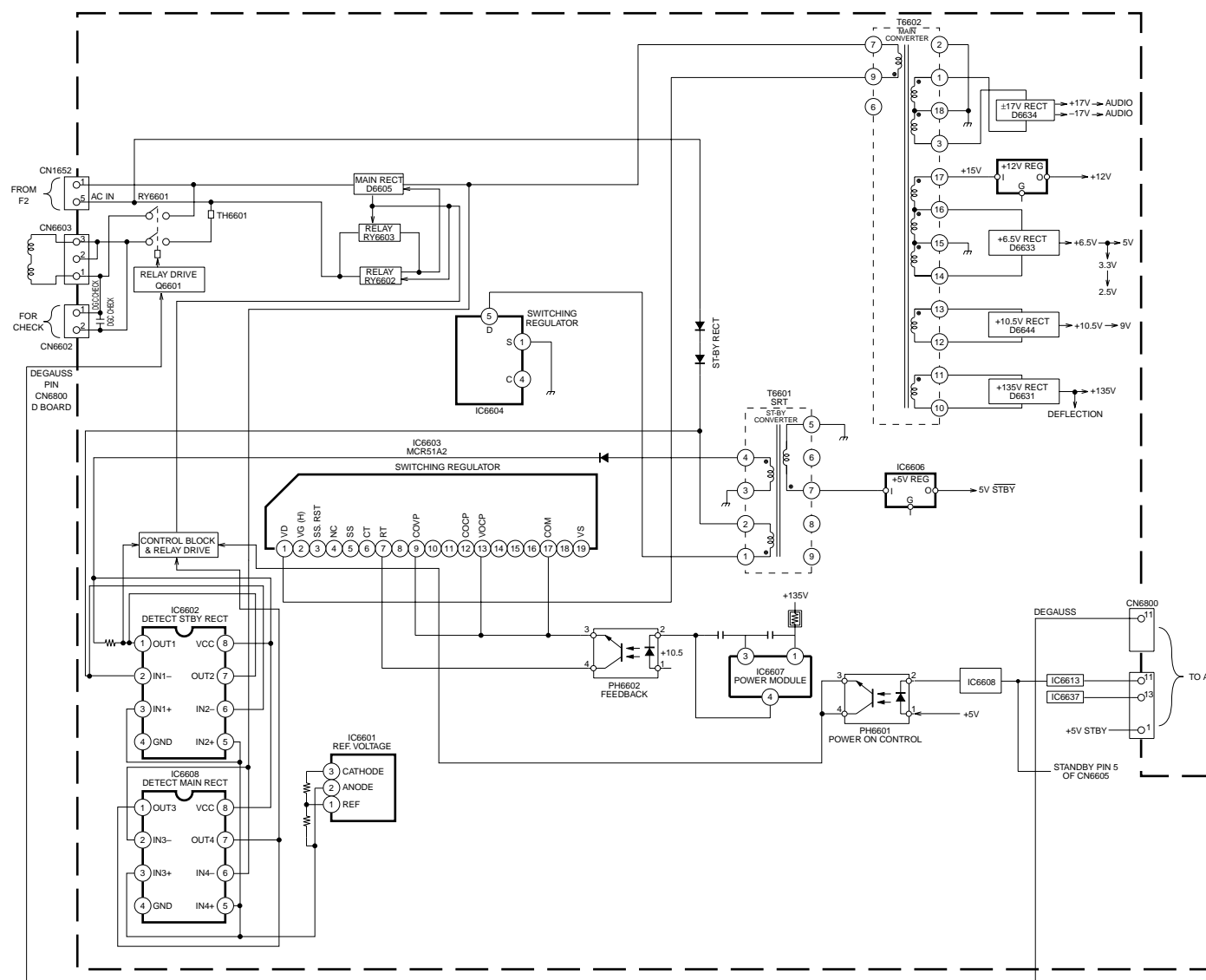


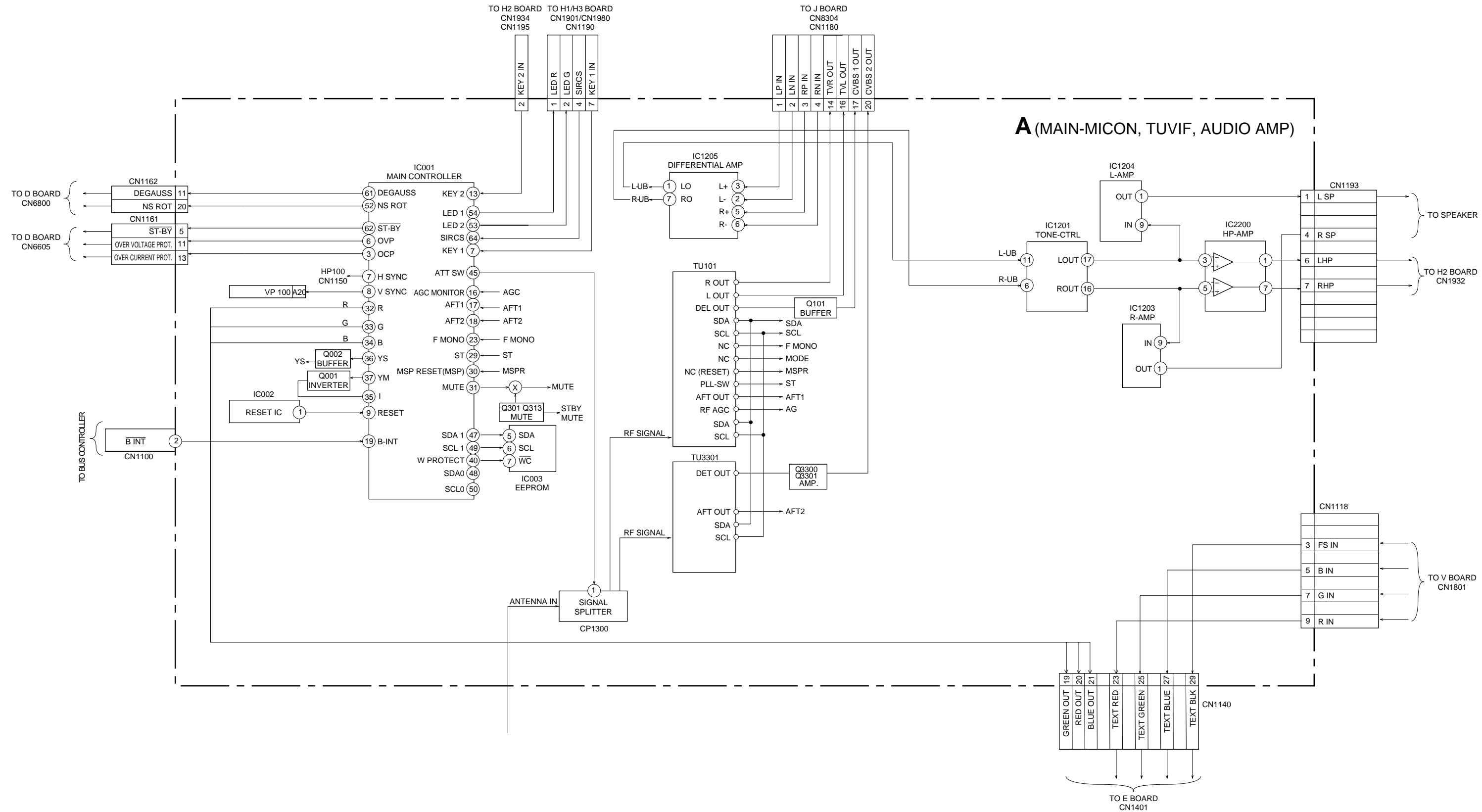
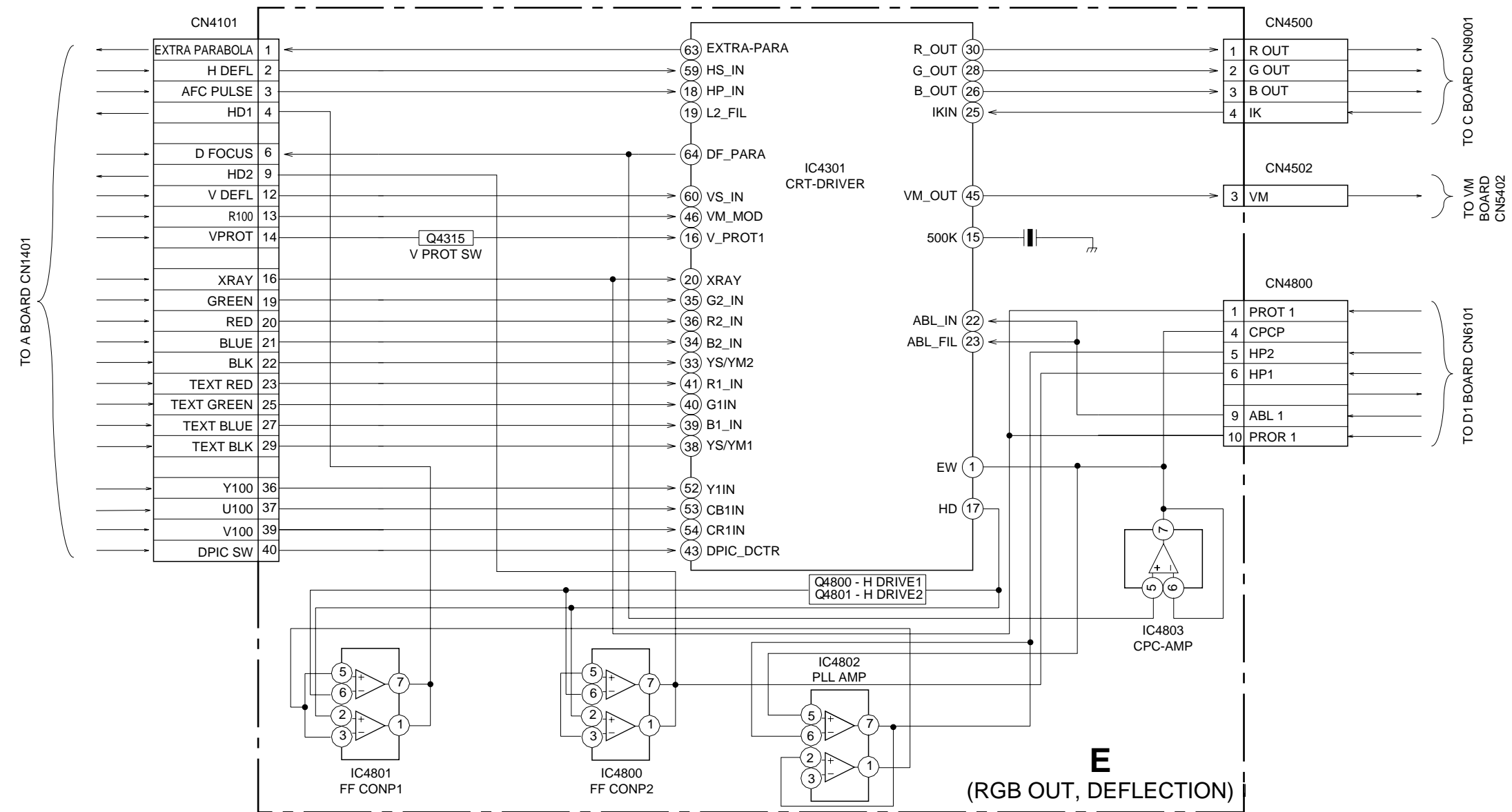




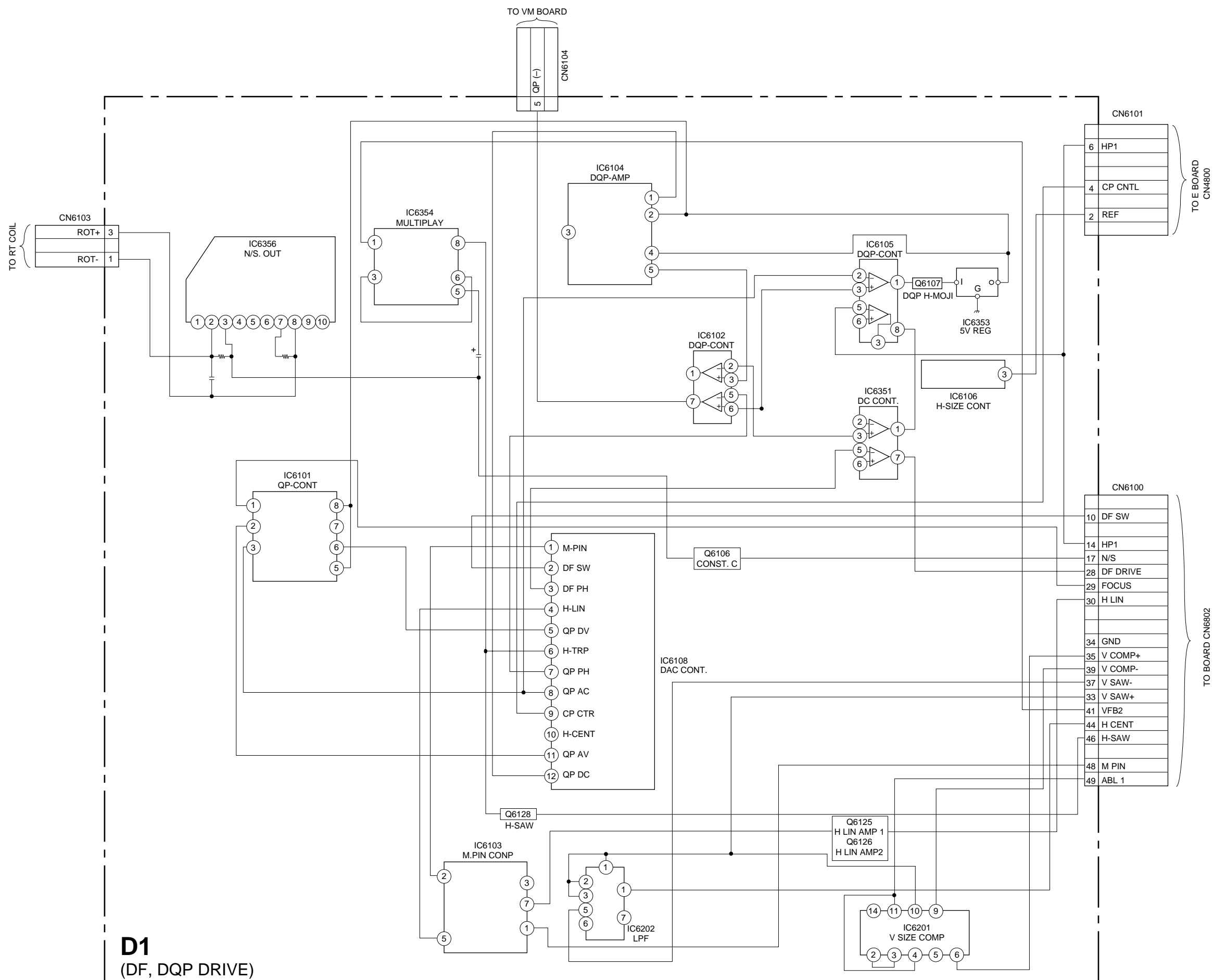
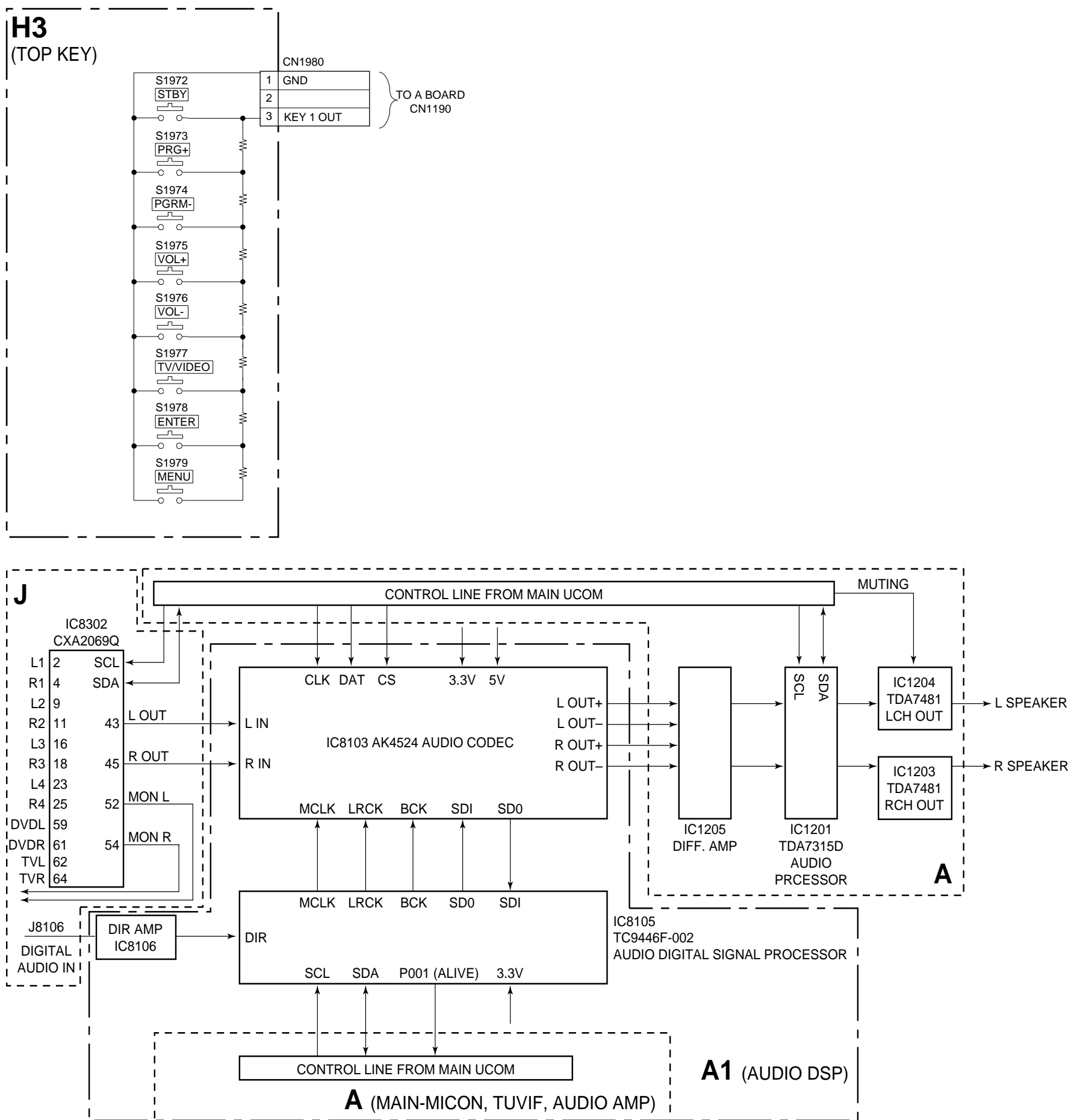
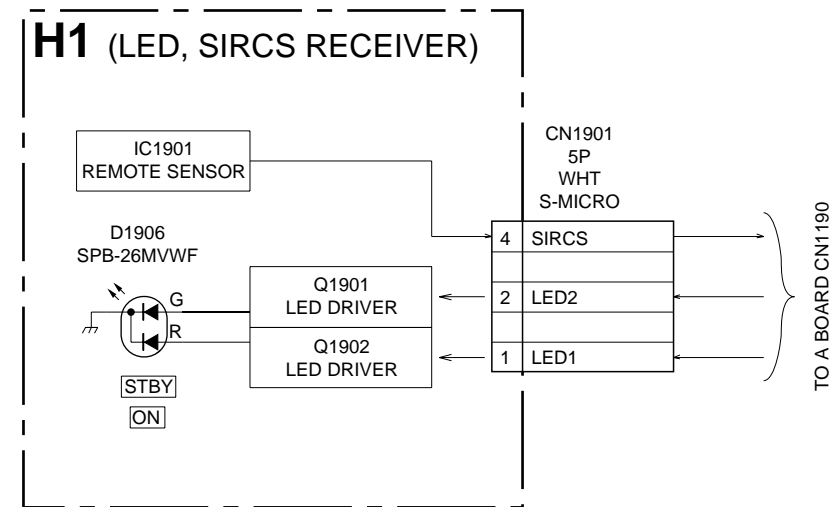
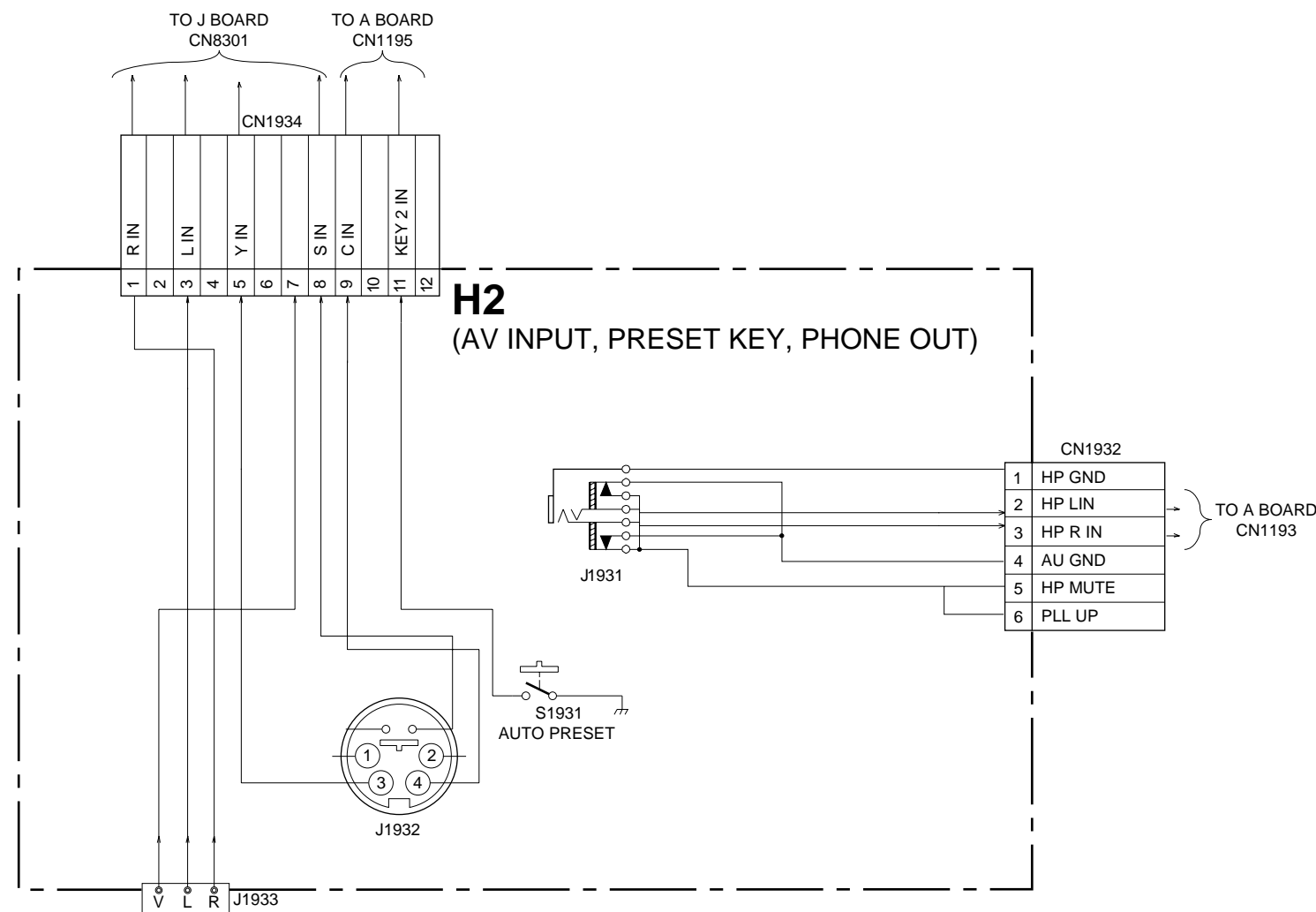


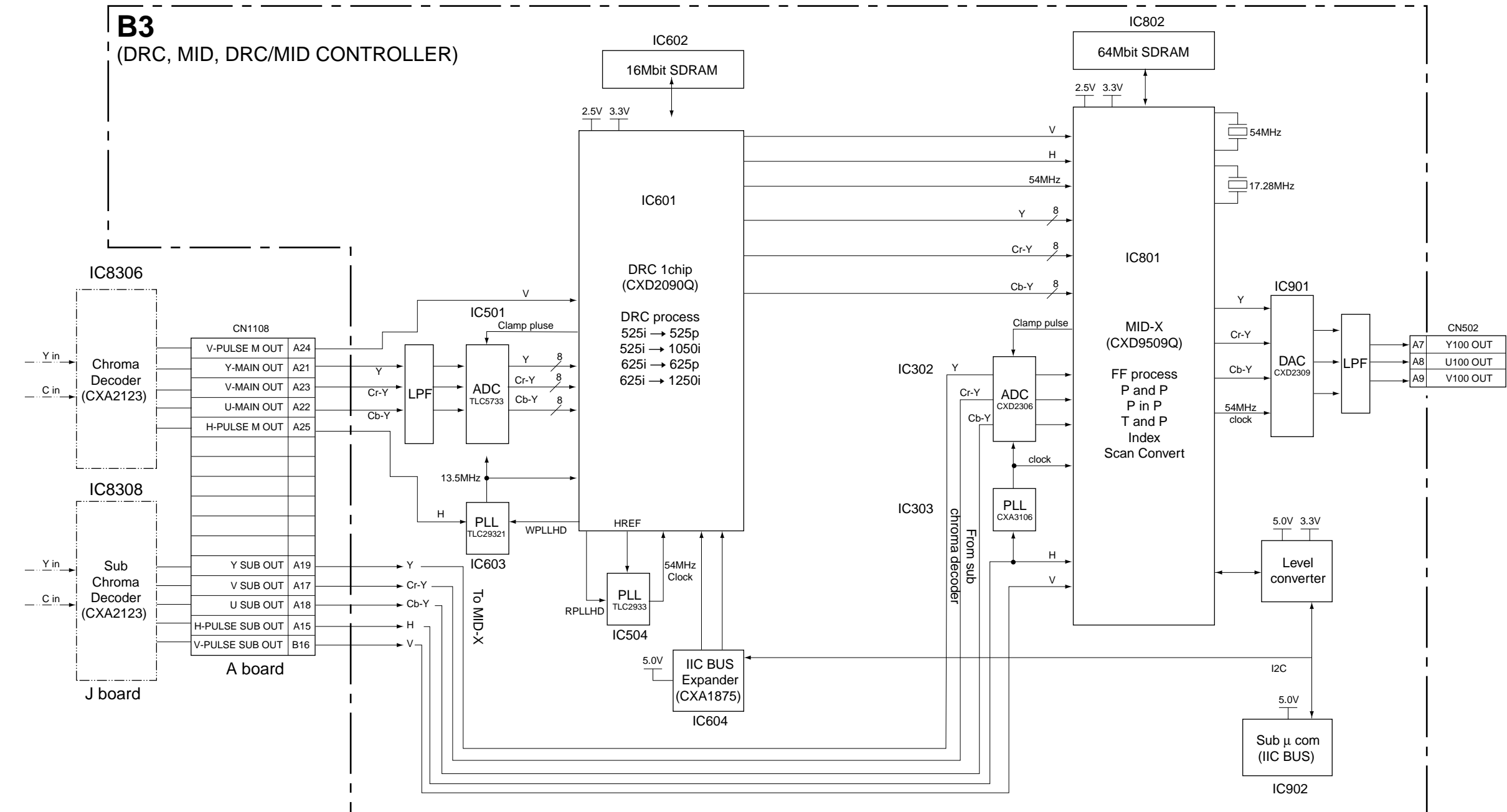
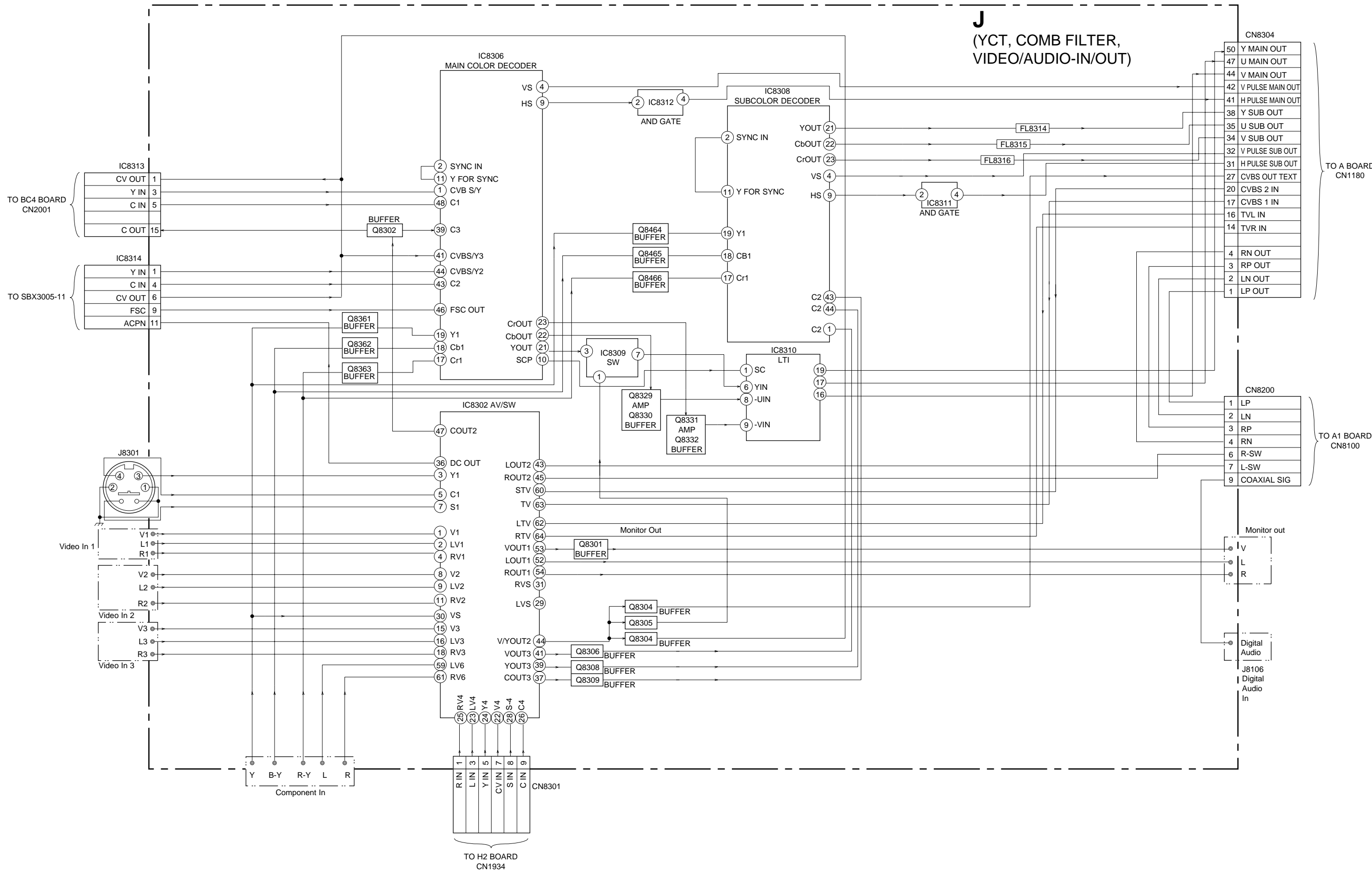
6-1. BLOCK DIAGRAM

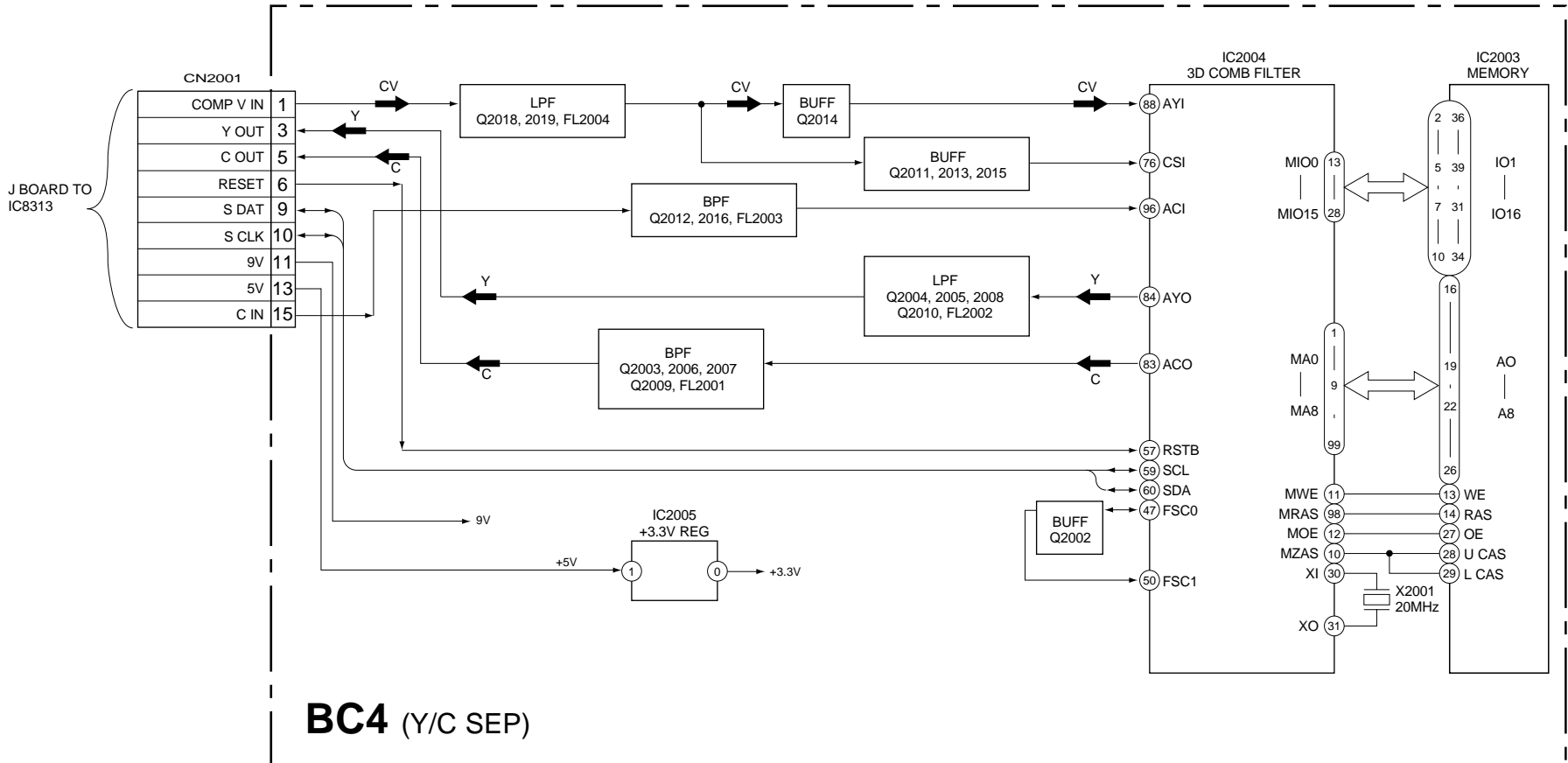


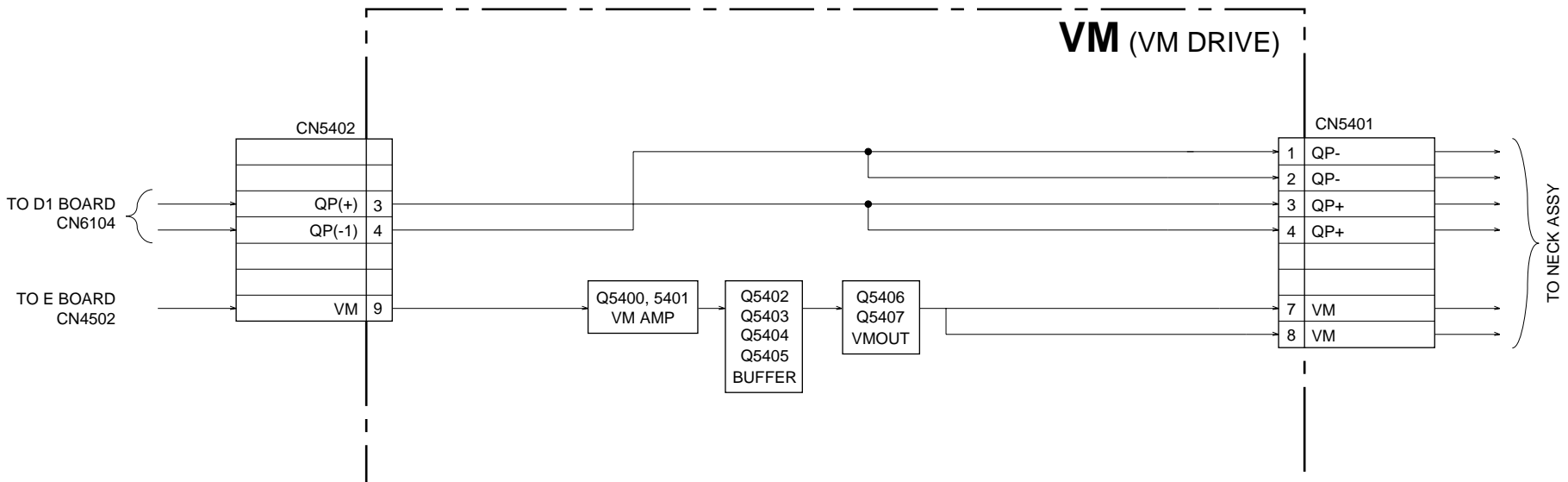




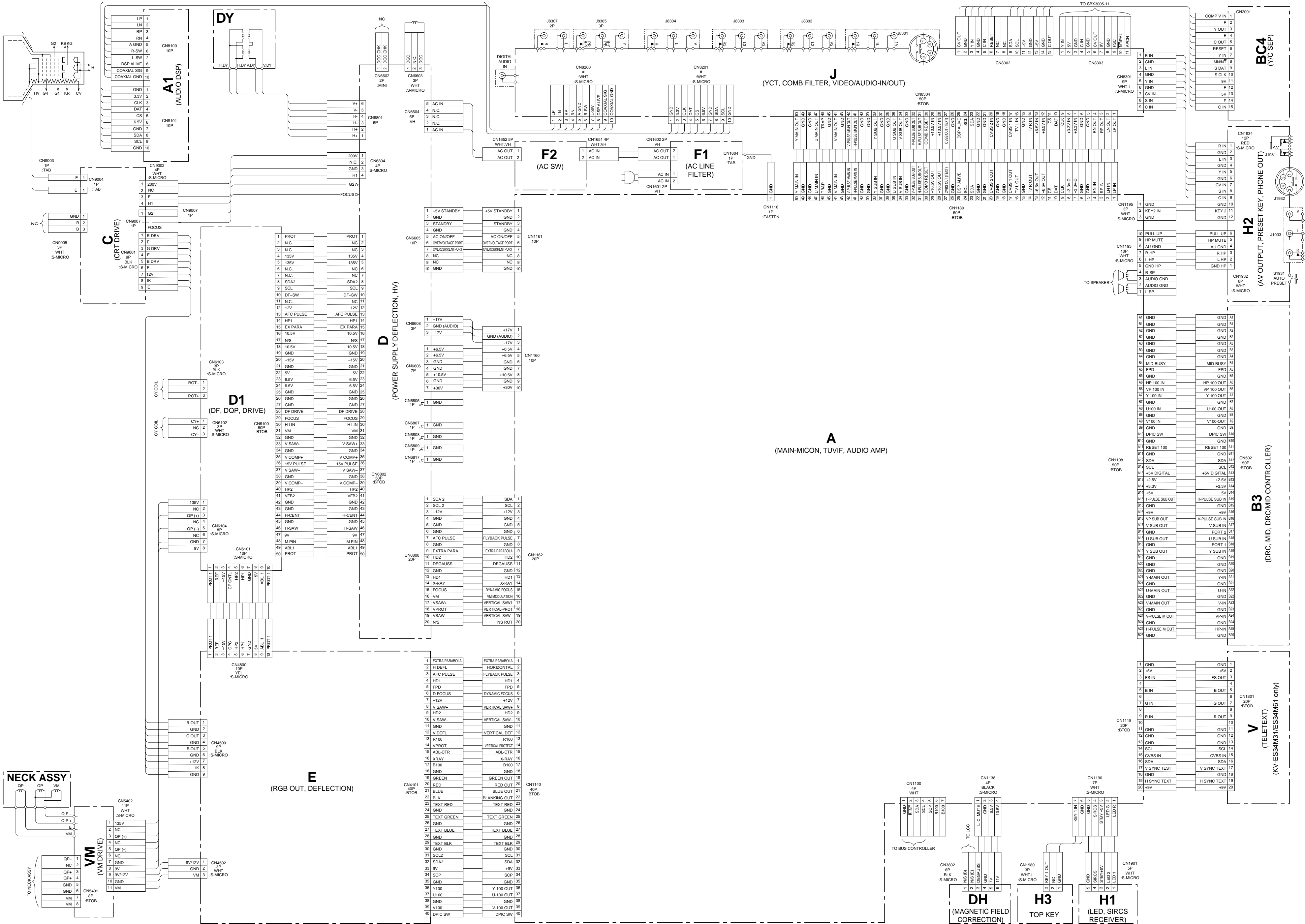




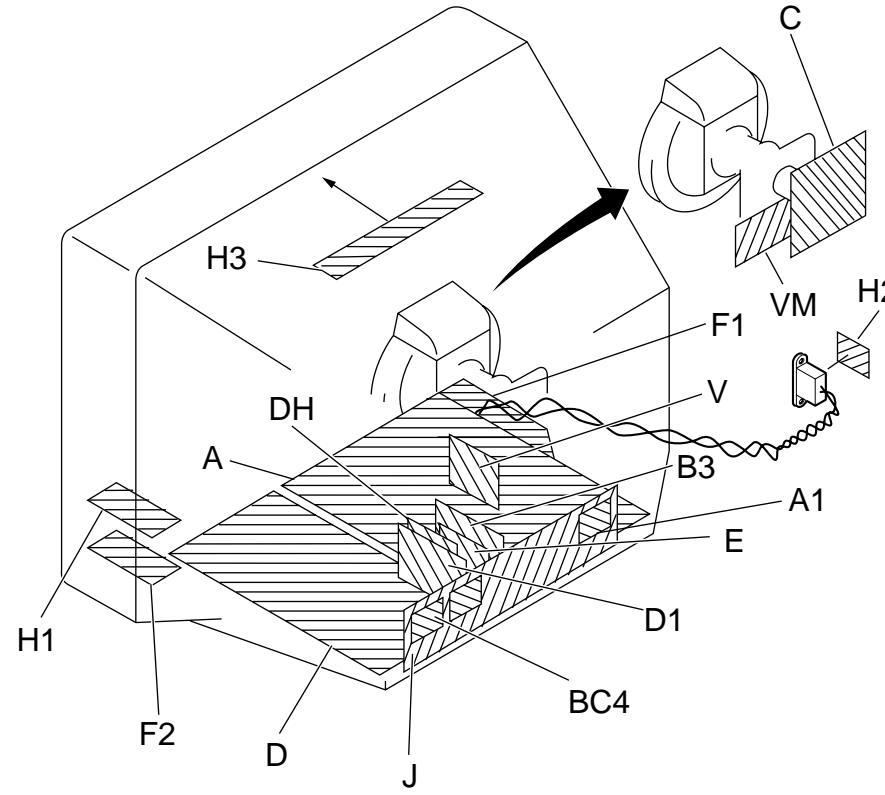




6-2. FRAME SCHEMATIC DIAGRAMS



6-3. CIRCUIT BOARDS LOCATION

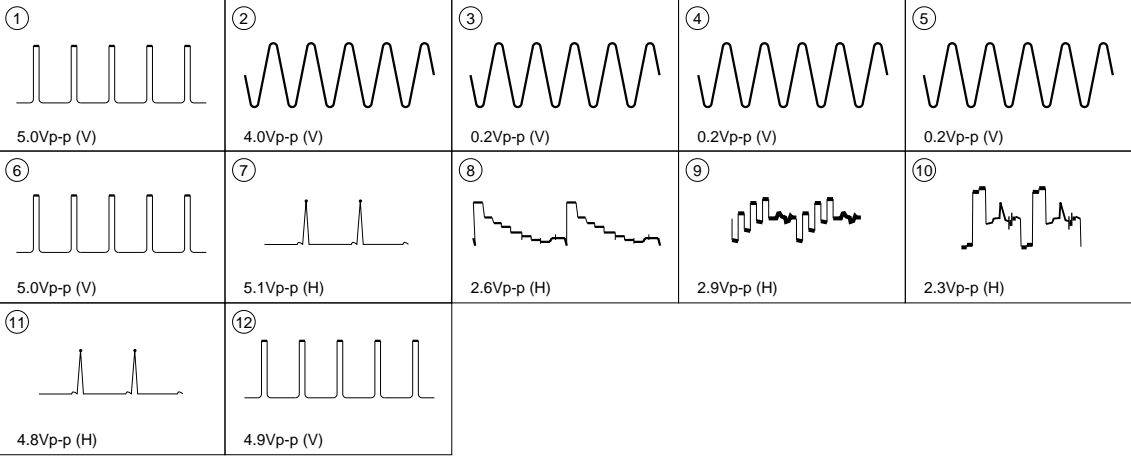


6-4. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

- Note:**
- All capacitors are in  $\mu\text{F}$  unless otherwise noted.
  - All electrolytic capacitors are rated at 50V unless otherwise noted.
  - All resistors are in ohms.
  - $k\Omega = 1000\Omega$ ,  $M\Omega = 1000k\Omega$ .
  - Indication of resistance which does not have rating electrical power is as follows.
  - Pitch: 5 mm
  - Rating electrical power 1/4W (CHIP: 1/10W)
  - $\square$  : nonflammable resistor.
  - $\Delta$  : internal component.
  - $\square$  : panel designation or adjustment for repair.
  - All variable and adjustable resistors have characteristic curve B unless otherwise noted.
  - Readings are taken with a color-bar signal input.
  - no mark : PAL
  - ( ) : SECAM
  - [ ] : NTSC 3.58
  - $\ll$  : NTSC 4.43
  - Readings are taken with a 10 MW digital multimeter.
  - Voltage are dc with respect to ground unless otherwise noted.
  - Voltage variations may be noted due to normal production tolerances.
  - All voltages are in V.
  - \* : Cannot be measured.
  - Circled numbers are waveform references.
  - : B + bus.
  - : B - bus.
  - $\Rightarrow$  : signal path.
- Reference information**
- | RESISTOR | COIL    | CAPACITOR |
|----------|---------|-----------|
| : RN     | : LF-8L | : TA      |
| : RC     | : TA    | : PS      |
| : FPRD   | : TA    | : PP      |
| : FUSE   | : PS    | : PT      |
| : RS     | : PS    | : MPS     |
| : RB     | : PS    | : MPP     |
| : RW     | : PS    | : ALB     |
| : *      | : PS    | : ALB     |
| : *      | : PS    | : ALR     |
- METAL FILM**
- SOLID
  - NONFLAMMABLE CARBON
  - NONFLAMMABLE FUSIBLE
  - NONFLAMMABLE METAL OXIDE
  - NONFLAMMABLE CEMENT
  - NONFLAMMABLE WIREWOUND
  - ADJUSTMENT RESISTOR
  - MICRO INDUCTOR
  - TANTALUM
  - STYROL
  - POLYPROPYLENE
  - MYLAR
  - METALIZED POLYESTER
  - METALIZED POLYPROPYLENE
  - BIPOLAR
  - HIGH TEMPERATURE
  - HIGH RIPPLE
- Note: The component identified by shading and mark Δ are critical for safety. Replace only with part number specified.**



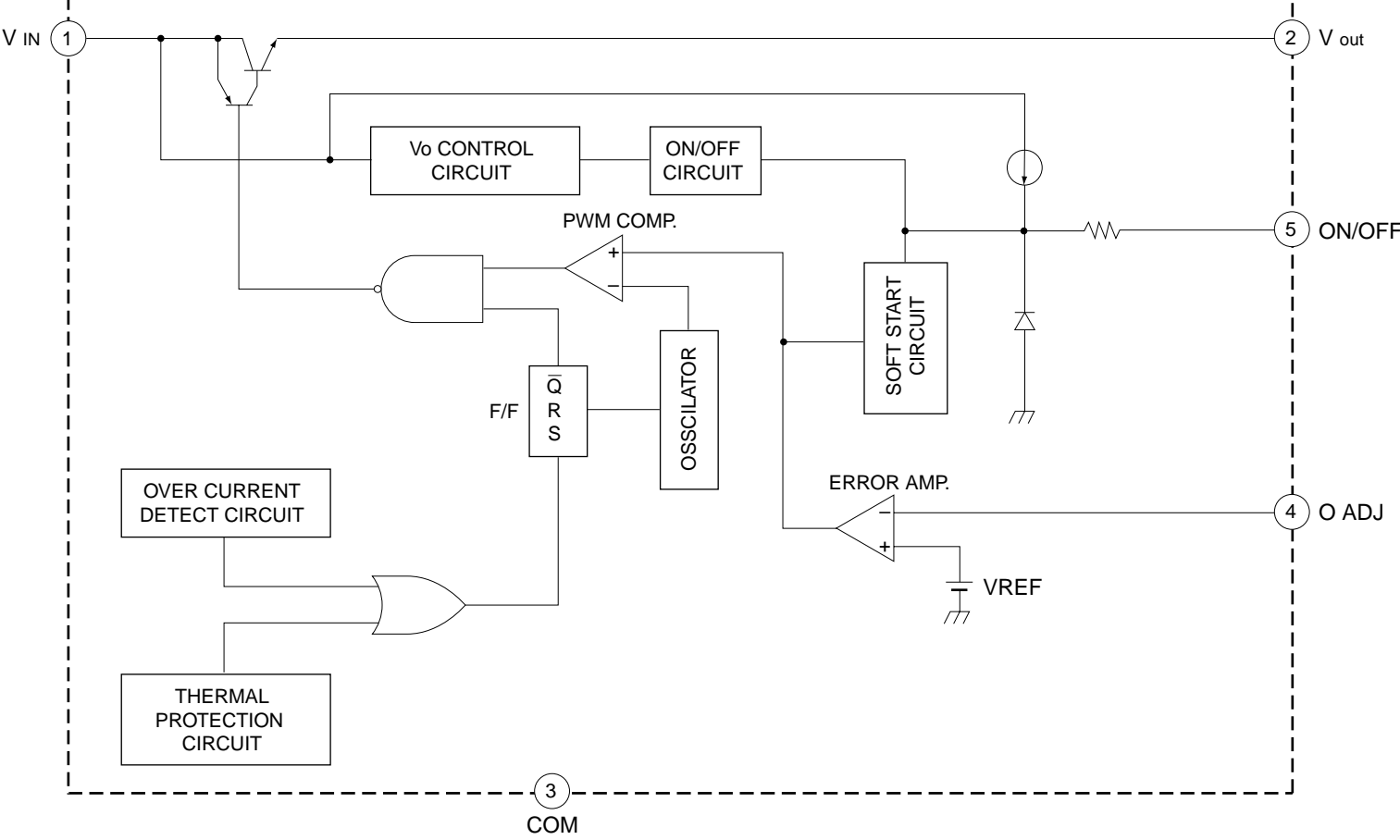
A BOARD WAVEFORMS



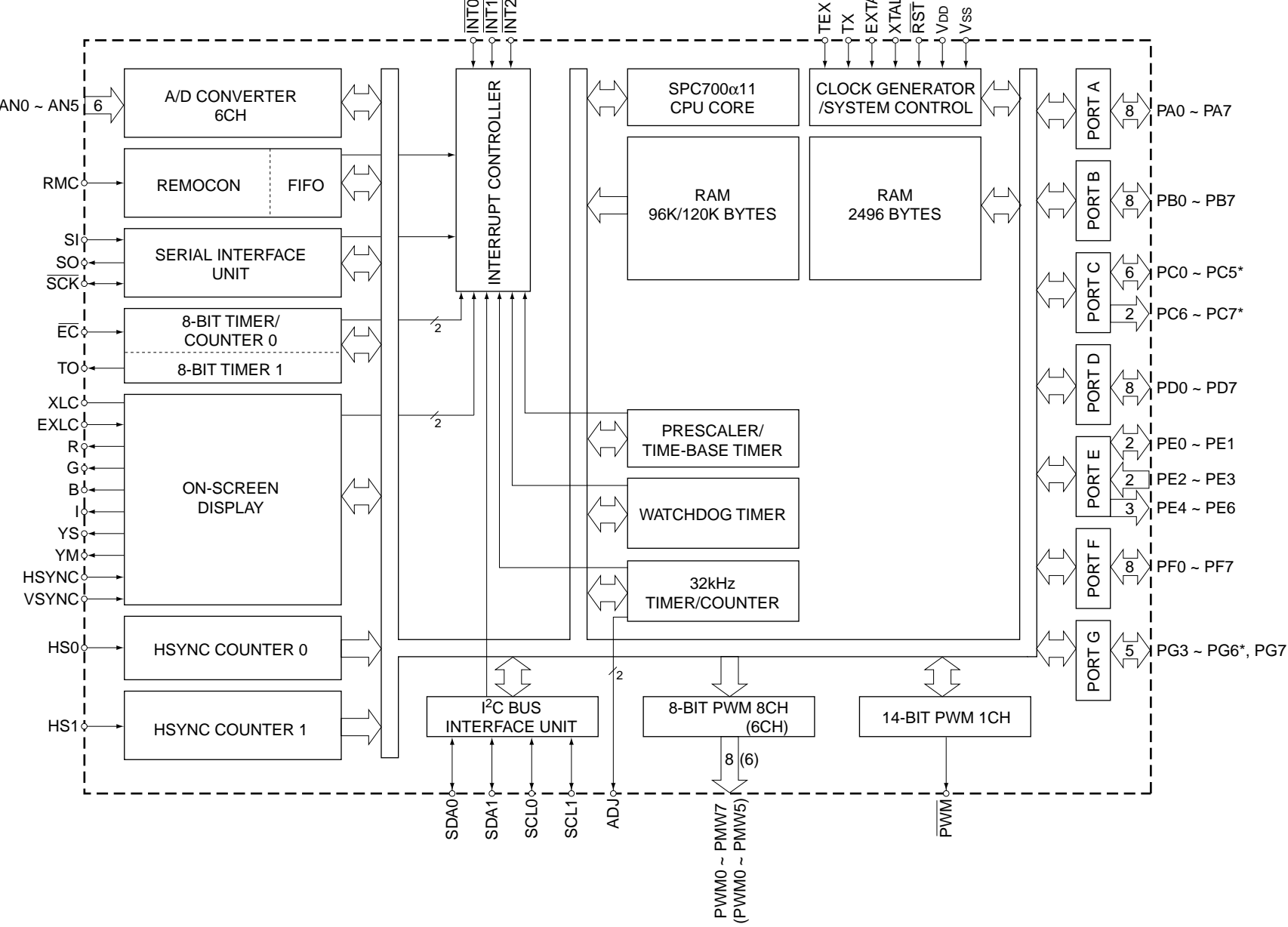
A BOARD \* MARK LIST

	KV-ES34M31	KV-ES34M61	KV-ES34M80	KV-ES34M90
CN1118	20P	20P	#	#
JR109	#	#	0 : CHIP	#
LP002	#	#	PIN, COATING, LEAD	#
TU101	BTF-WG442	BTF-WG442	BTF-WG434	BTF-WG442

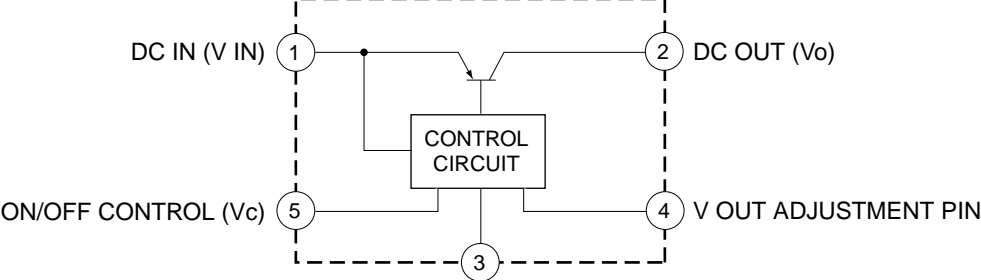
A BOARD IC2603 PQICG2032FZ



A BOARD IC001 CXP750096-012Q



A BOARD IC2604 PQ5EV3



A BOARD (Component Side)

IC	TRANSISTOR
IC001	B-9
IC002	C-8
IC003	A-8
IC1201	E-13
IC1203	F-13
IC1204	B-13
IC1205	F-12
IC2200	E-12
IC2600	E-8
IC2601	G-10
IC2603	F-9
IC2604	F-8
Q1201	D-12
Q1206	D-13
Q1209	D-13
Q1210	D-13
Q1205	E-13
D1208	E-13
D1209	D-11

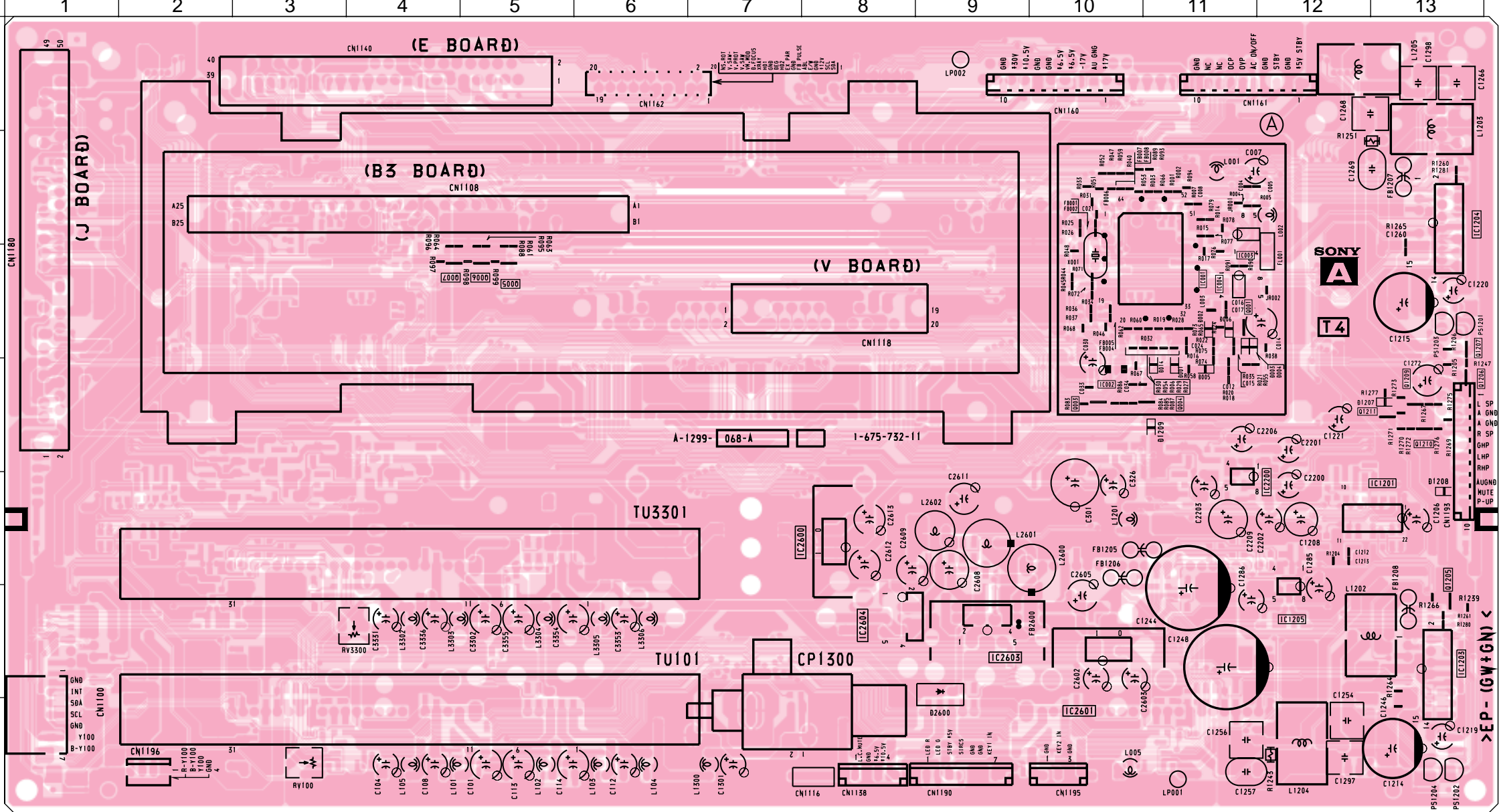
A BOARD (Conductor Side)

IC	DIODE
IC100	G-10
IC901	I-13
IC1203	G-1
IC1204	B-1
IC2600	E-7
IC2601	F-4
IC2603	F-5
IC2604	F-6
Q101	G-11
Q301	D-4
Q313	D-4
Q902	I-13
Q2200	D-3
Q2201	E-4
Q3300	F-11
D300	A-9
D301	B-9
D302	B-6
D1205	F-1
D2200	E-3
D2201	D-3

PRINTED WIRING BOARDS

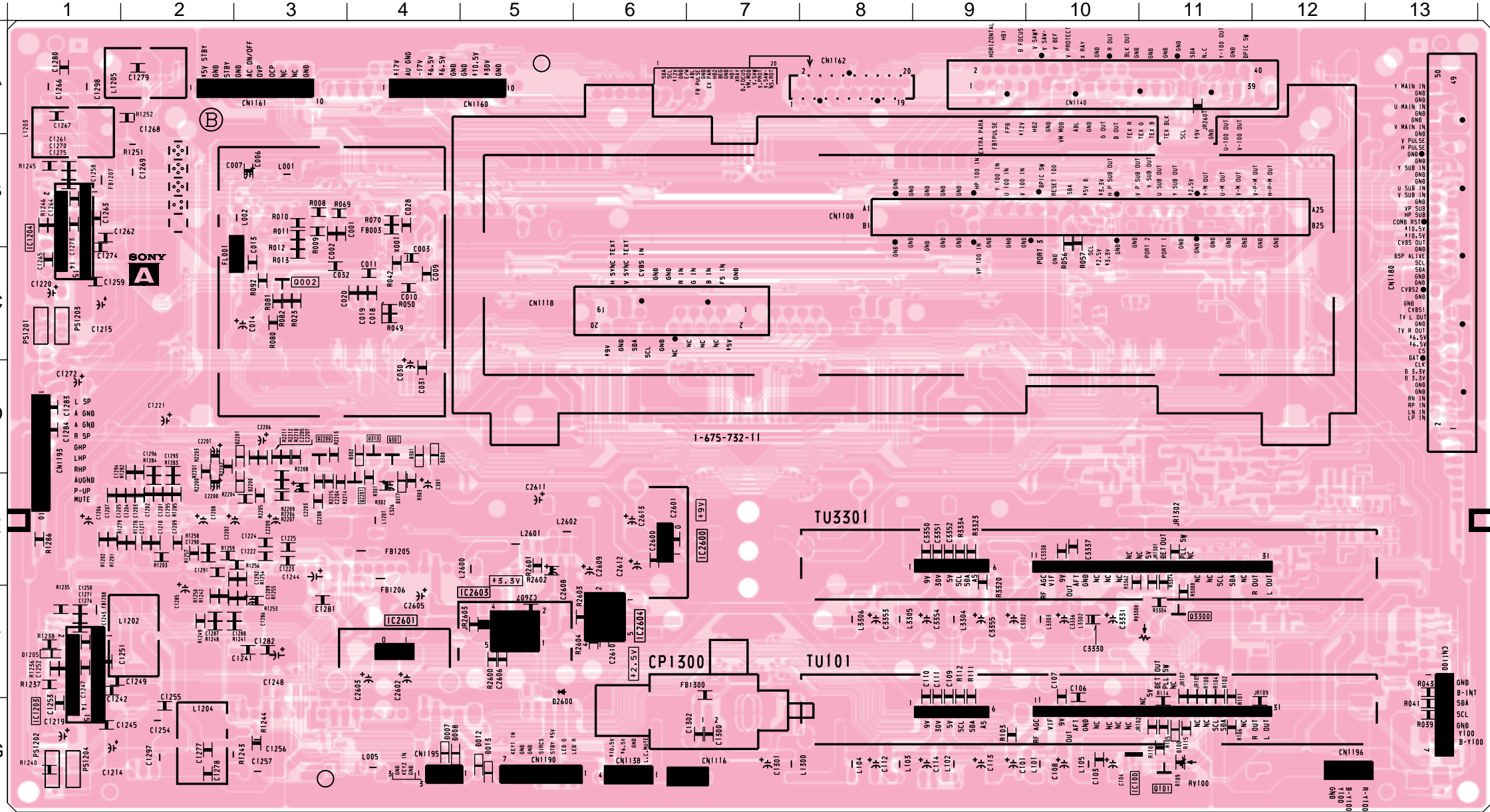
A [MAIN-MICON, TUVIF, AUDIO AMP]

- A Board (Component Side) -



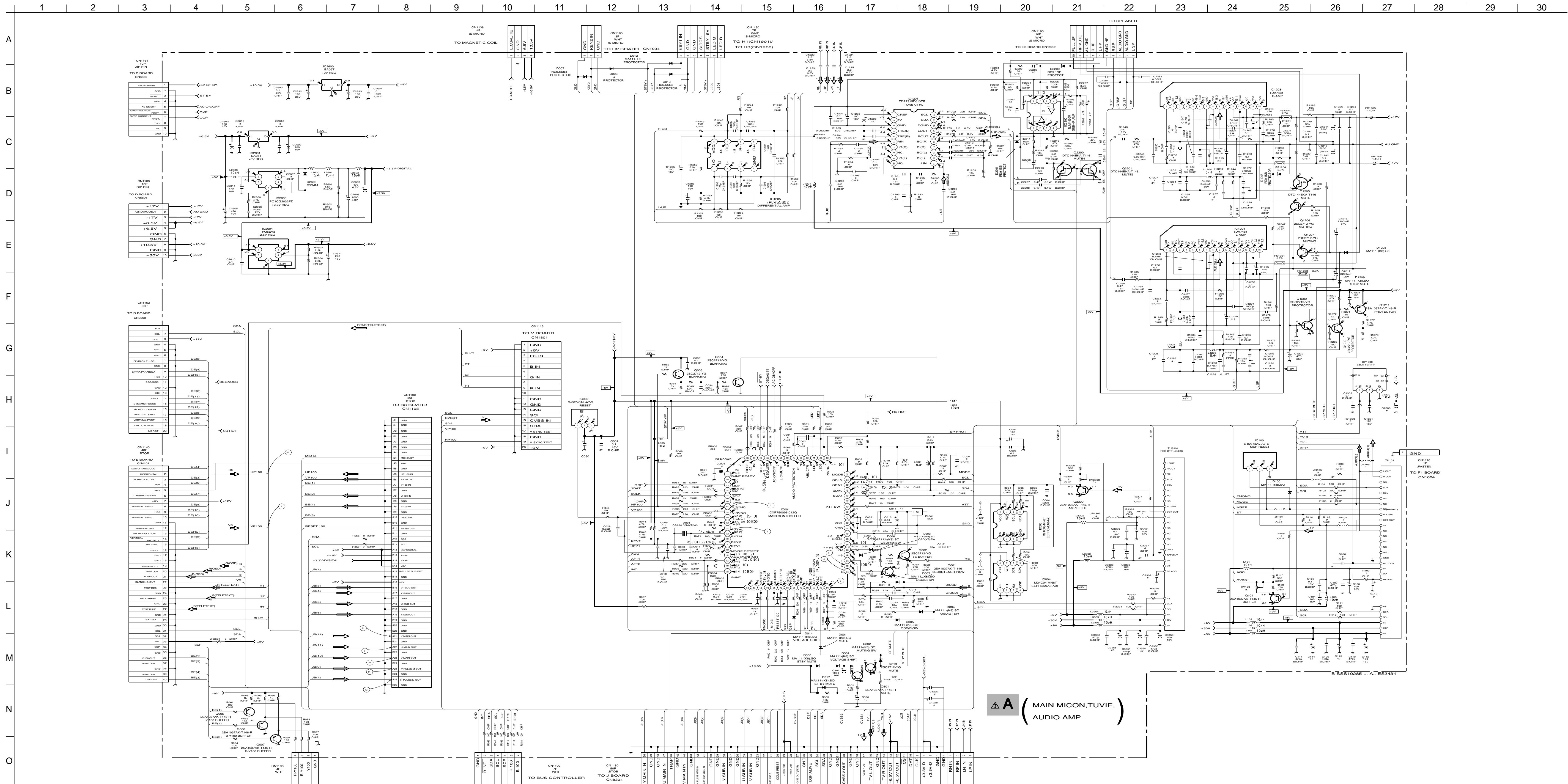
- :Pattern from the side which enables seeing.
- :Pattern from the rear side.

- A Board (Conductor Side) -

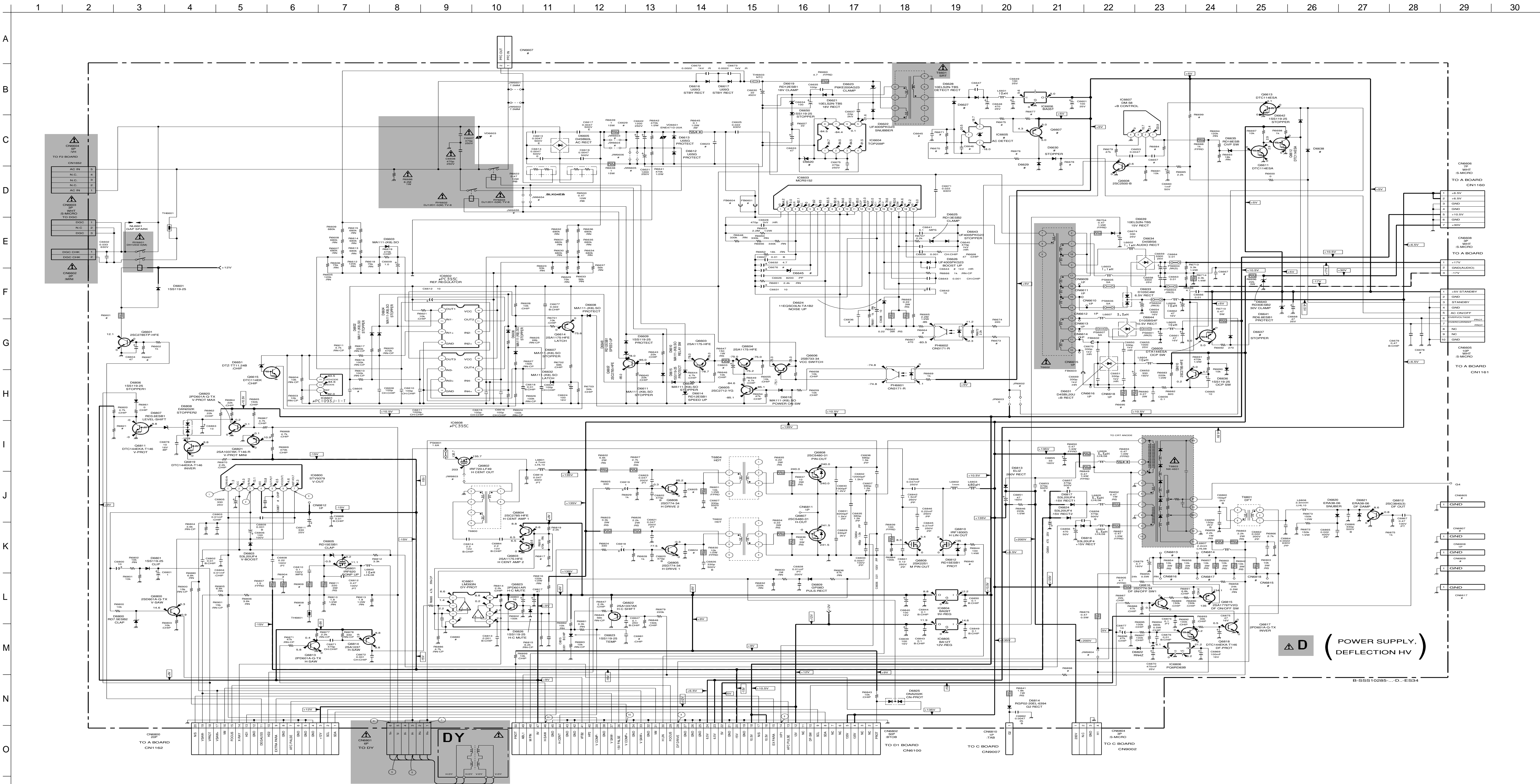




### (1) Schematic Diagram of A Board



(2) Schematic Diagram of D Board

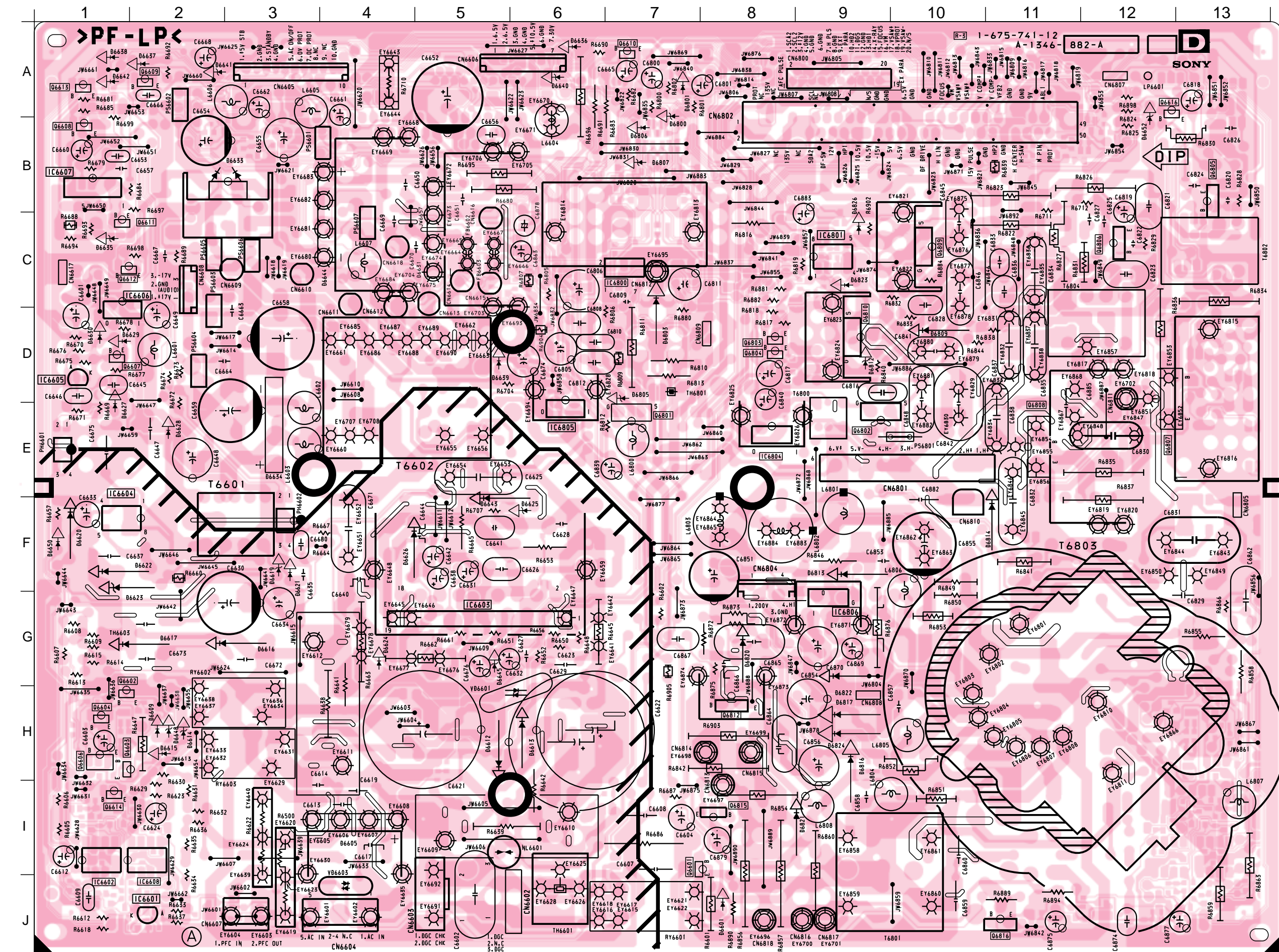




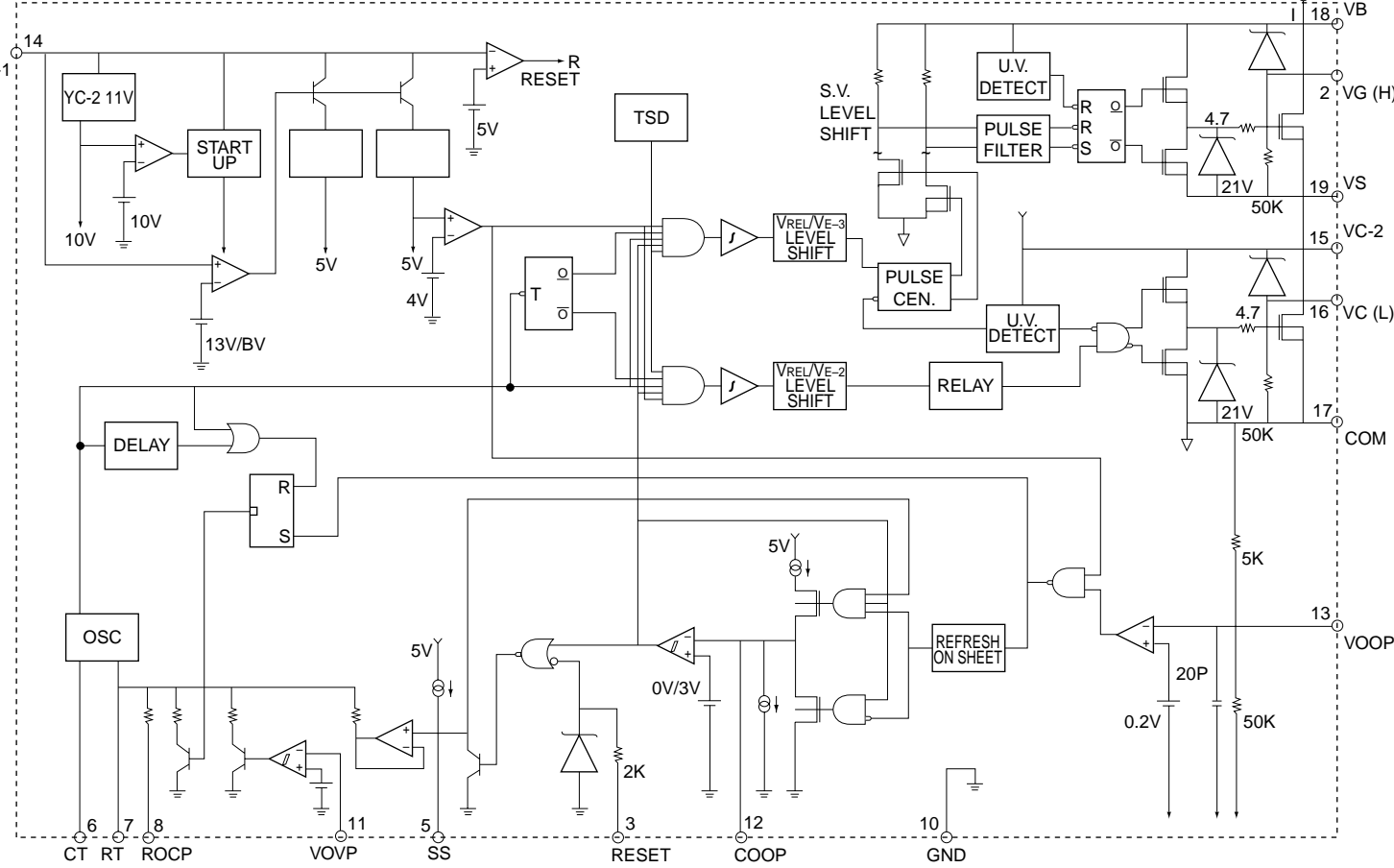
# PRINTED WIRING BOARDS

**D** [POWER SUPPLY, DEFLECTION, HV]

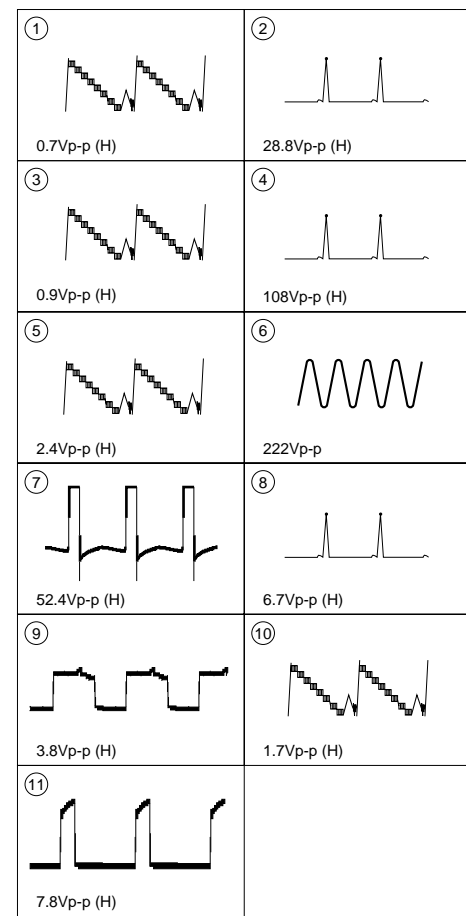
– D Board (Component Side) –



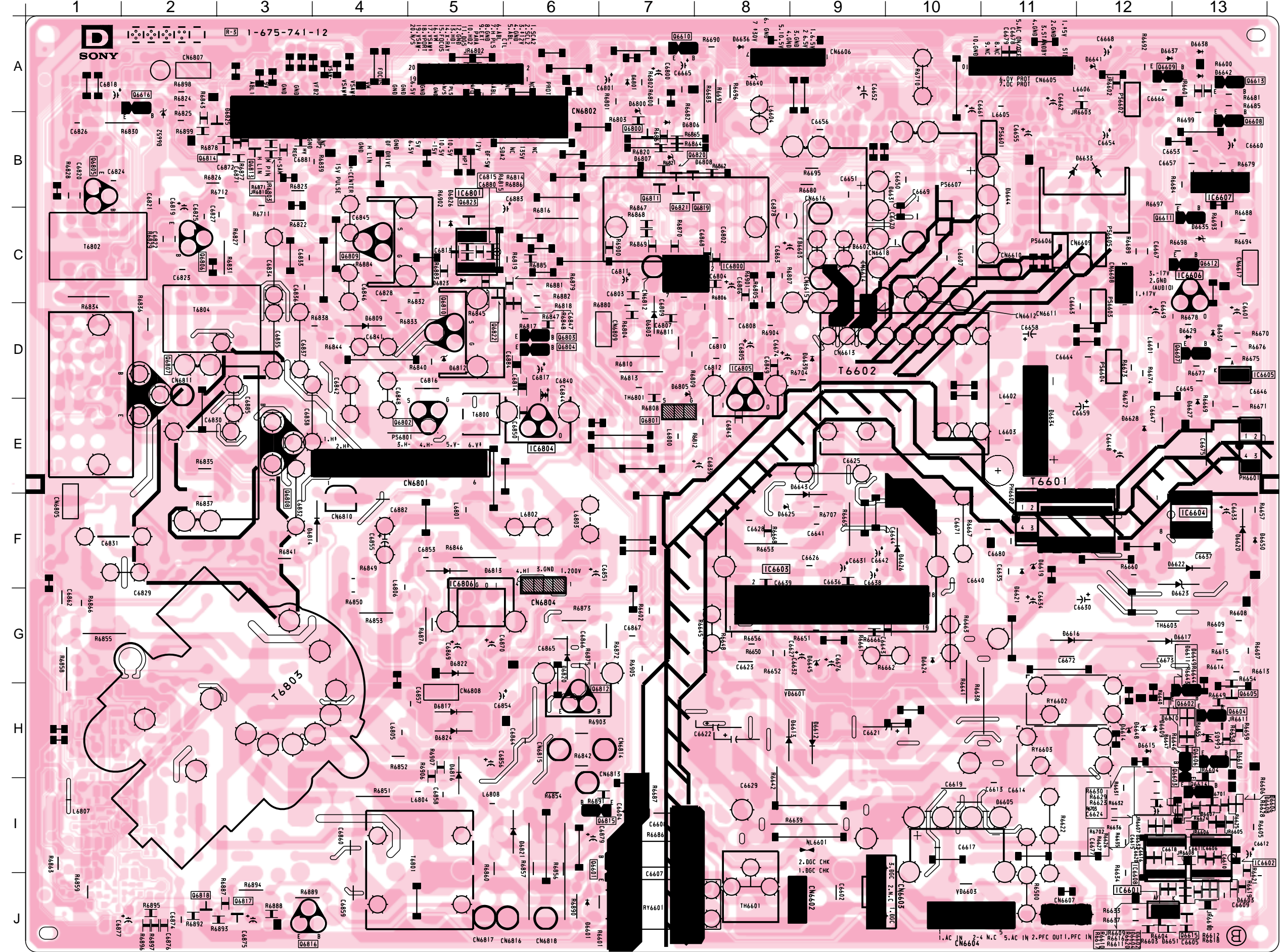
D BOARD IC6603 MCR5152



D BOARD WAVEFORMS



– D Board (Conductor Side) –

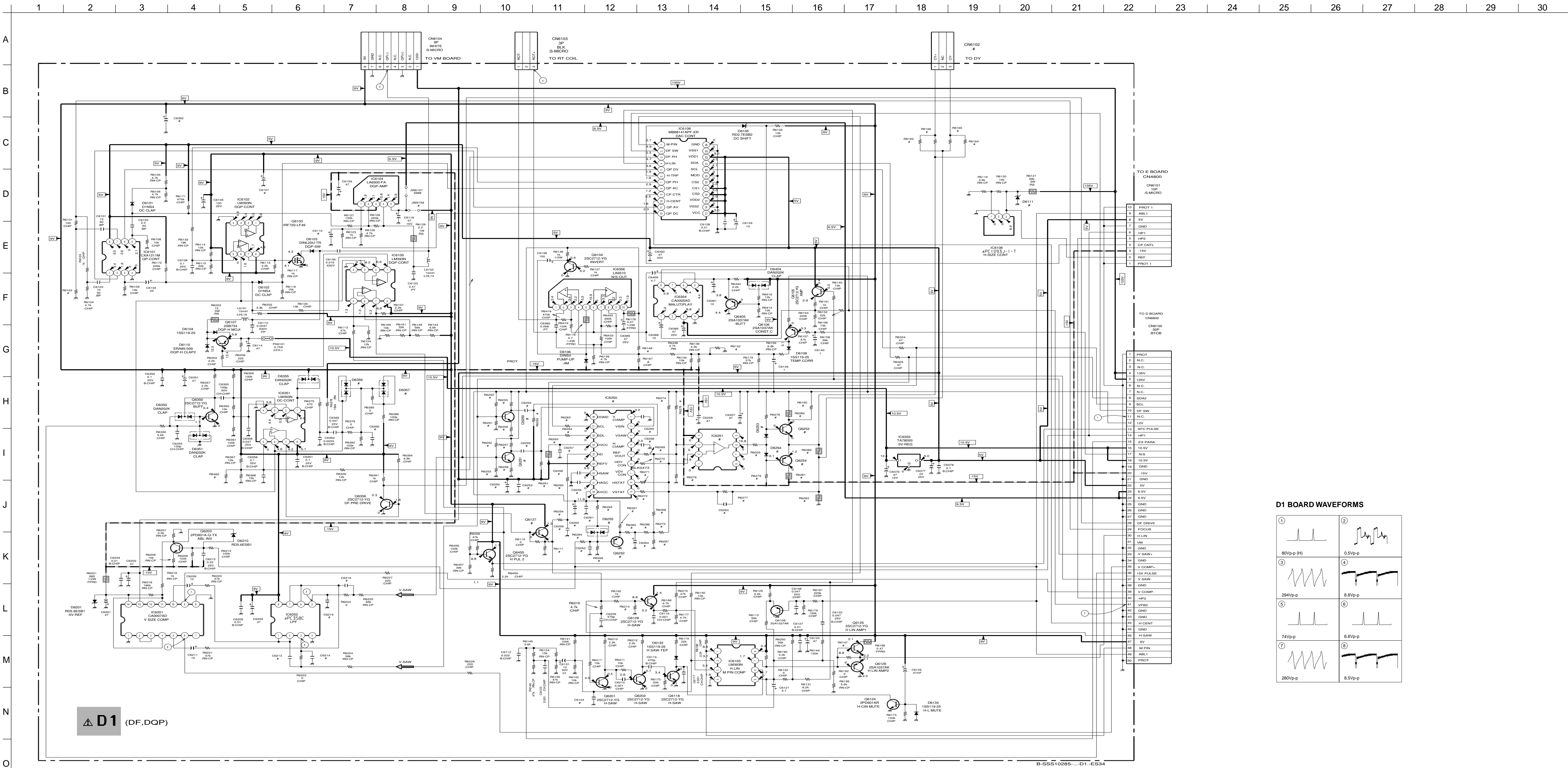


D BOARD (Component Side)

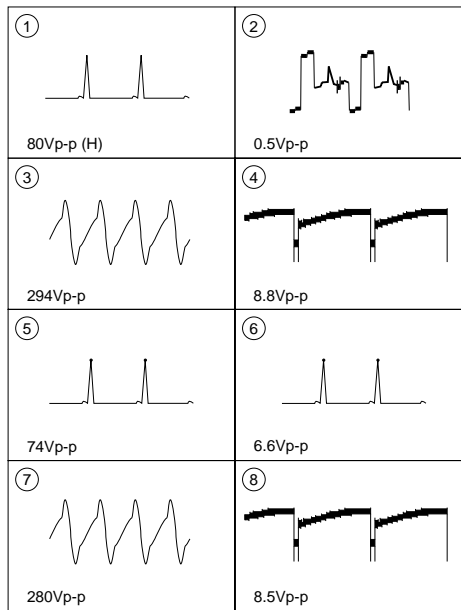
IC		DIODE	D6642	A-1	
IC6601	J-2	D6601	J-8	D6643	F-5
IC6602	J-2	D6605	I-4	D6644	C-4
IC6603	G-5	D6609	H-2	D6645	G-5
IC6604	E-1	D6612	H-5	D6646	H-2
IC6605	D-1	D6613	H-6	D6647	F-1
IC6606	C-1	D6614	H-2	D6648	B-7
IC6607	B-1	D6615	H-2	D6649	A-7
IC6800	C-7	D6616	G-3	D6805	E-7
IC6801	C-9	D6617	G-2	D6806	B-7
IC6804	E-8	D6619	F-3	D6807	B-7
IC6805	E-6	D6620	F-1	D6809	D-10
IC6806	G-9	D6621	F-3	D6812	D-9
TRANSISTOR		D6623	G-2	D6813	D-11
		D6624	G-2	D6814	F-11
		D6624	G-4	D6816	I-9
		D6625	F-6	D6817	H-9
Q6601	1-8	D6626	F-4	D6820	H-8
Q6602	G-2	D6627	E-1	D6821	I-9
Q6603	H-2	D6628	E-2	D6822	G-9
Q6604	H-1	D6629	E-2	D6823	C-9
Q6606	H-1	D6630	D-1	D6824	C-8
Q6608	B-1	D6631	C-5	D6826	C-9
Q6609	A-2	D6633	B-3	D6805	B-12
Q6610	A-7	D6634	E-3	D6806	C-12
Q6611	A-2	D6635	C-1	D6807	B-12
Q6612	C-1	D6636	A-6	D6808	E-11
Q6613	A-1	D6637	A-2	D6809	C-11
Q6801	E-7	D6638	B-1	D6810	D-10
Q6802	E-9	D6639	D-5	D6811	D-10
Q6803	D-8	D6640	A-6	D6814	I-1
Q6804	D-8	D6641	A-3	D6815	I-8
				D6816	I-11



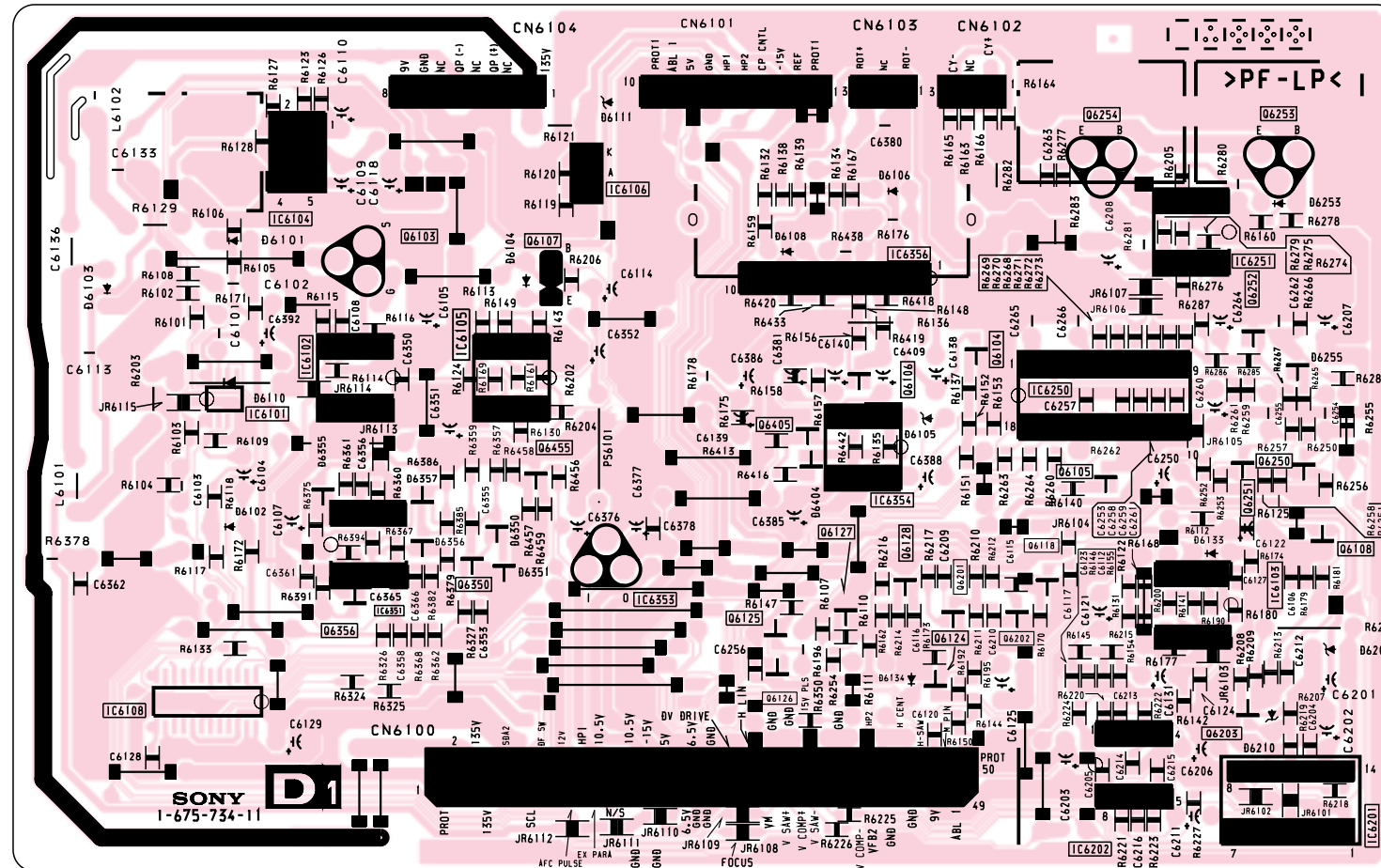
(3) Schematic Diagram of D1 Board



D1 BOARD WAVEFORMS



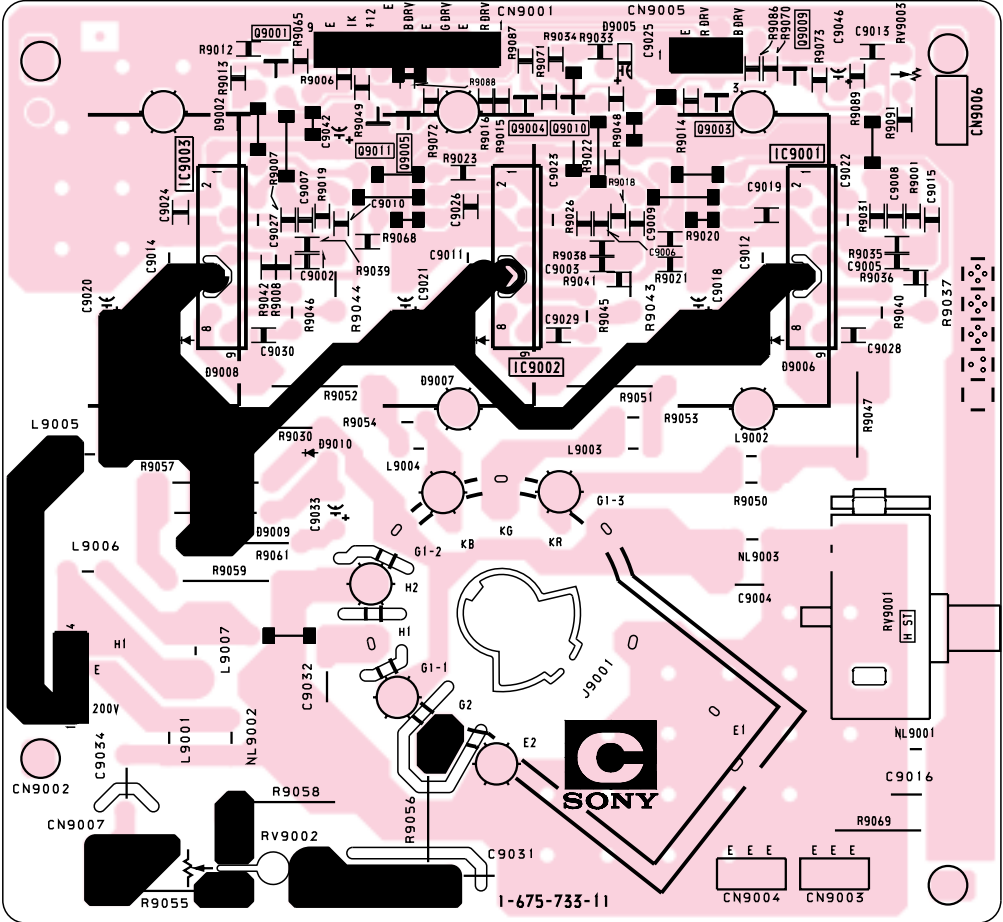
**– D1 Board –**



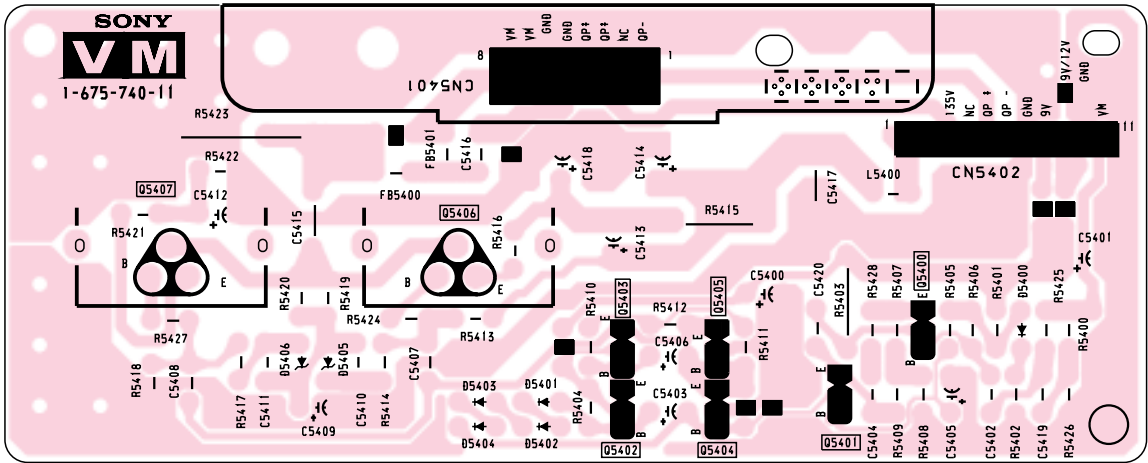
PRINTED WIRING BOARDS

**C** [CRT DRIVE]    **VM** [VM DRIVE]    **F1** [AC LINE FILTER]

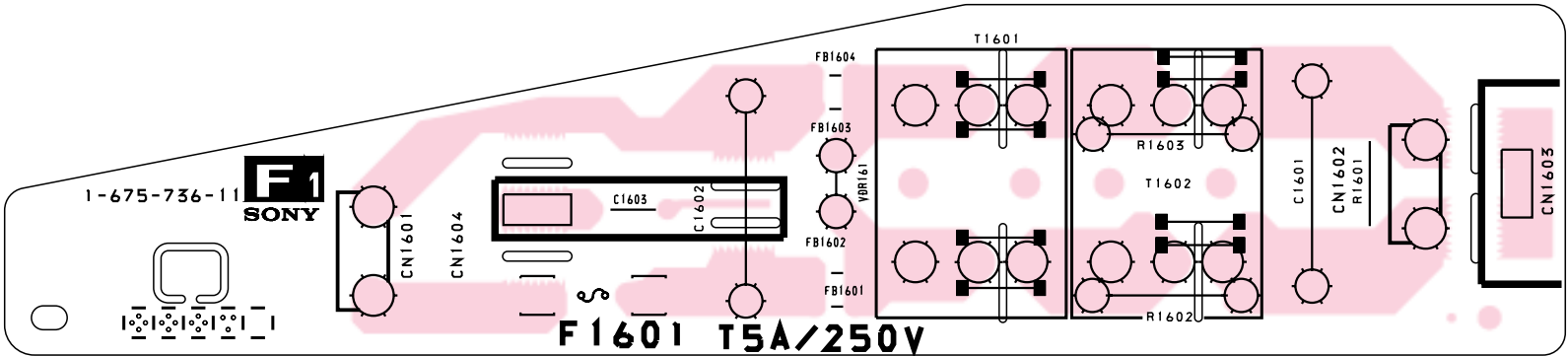
– C Board –

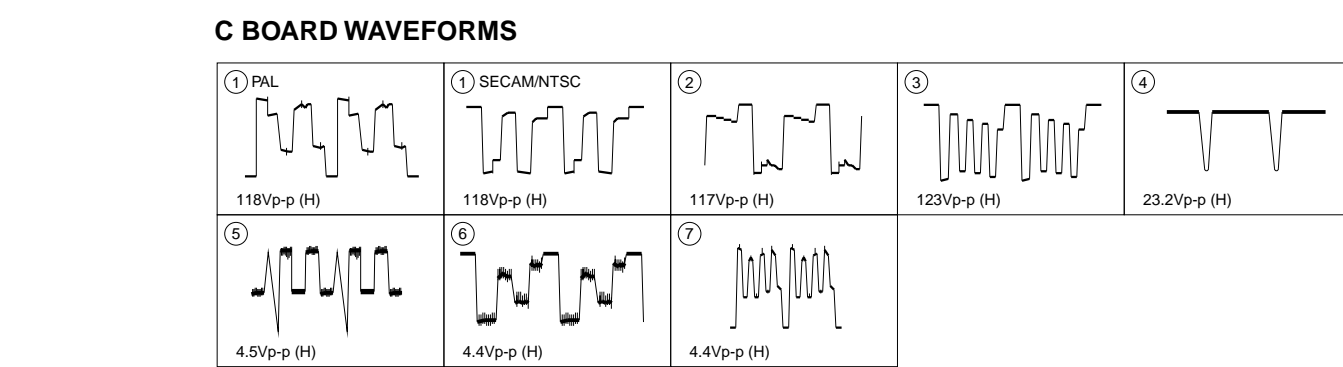
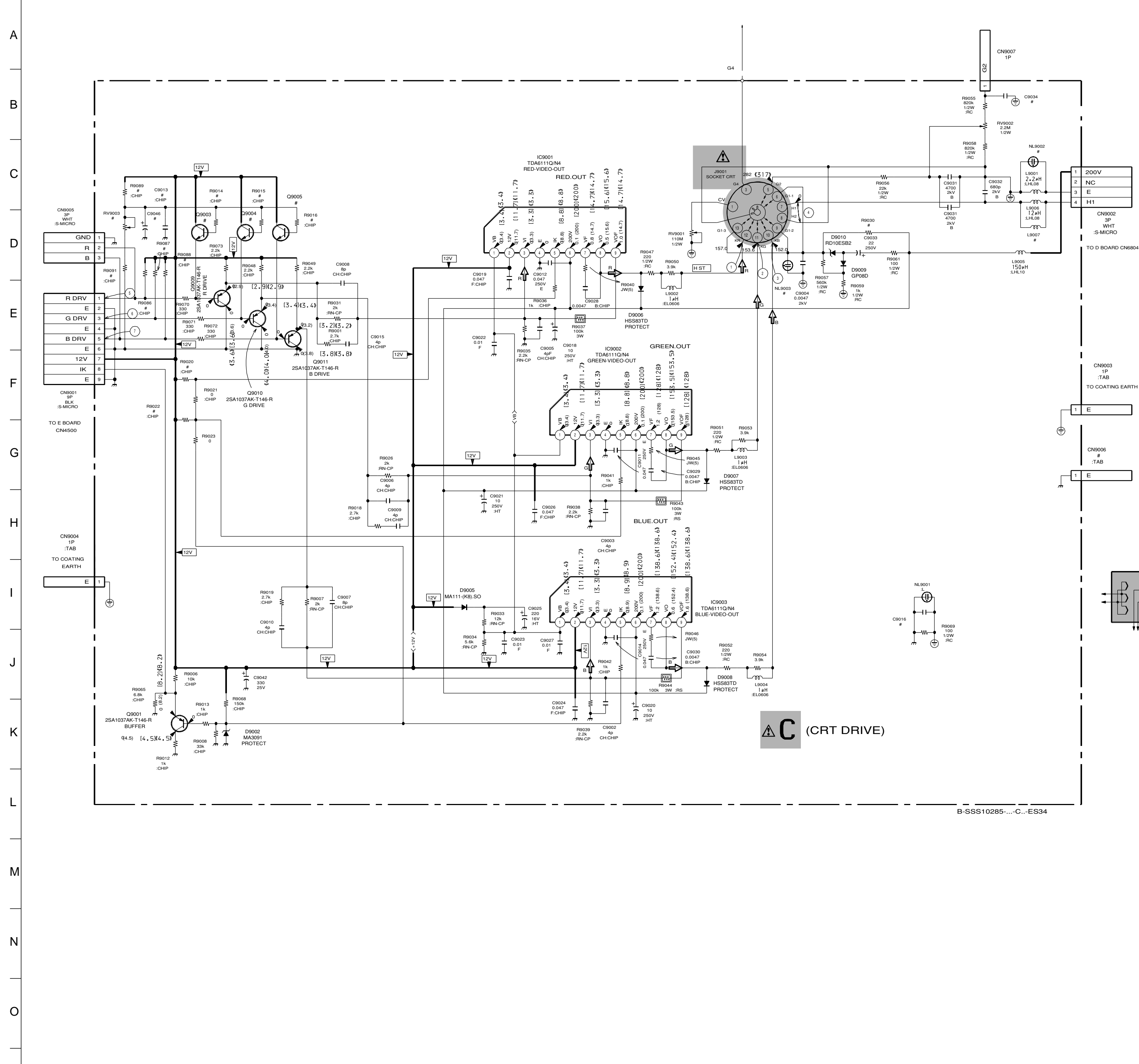


– VM Board –

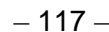


– F1 Board –





1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
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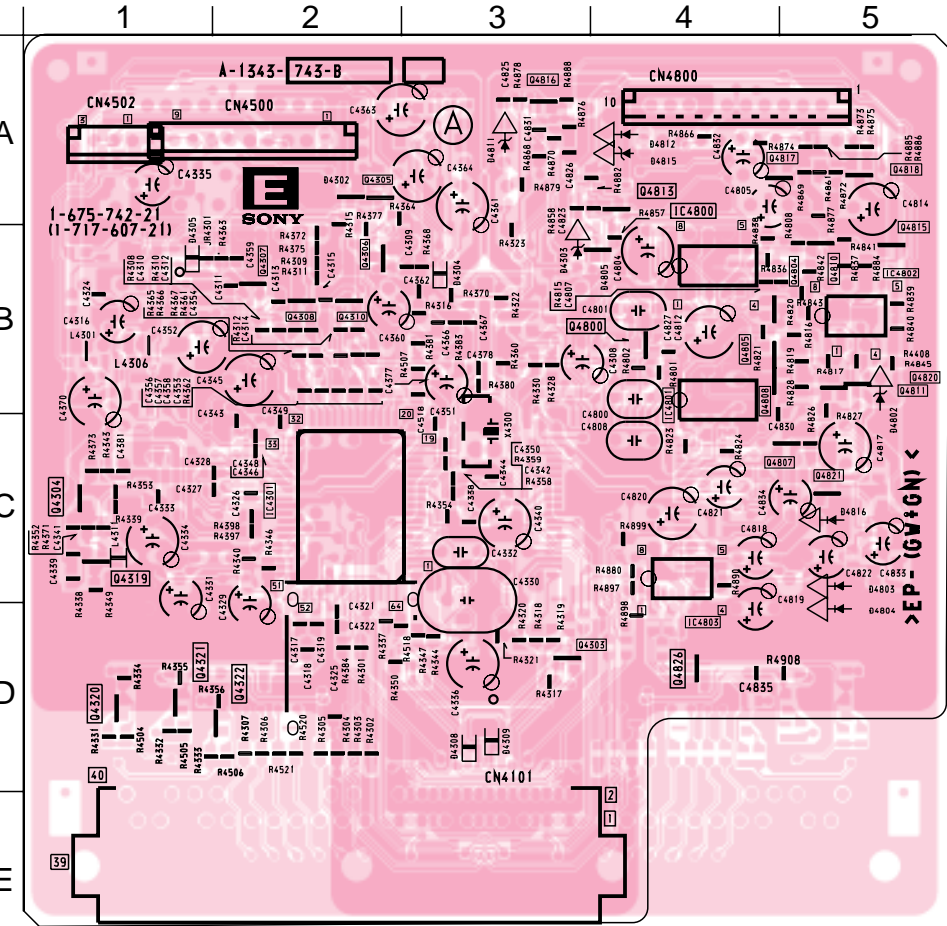




PRINTED WIRING BOARDS

**E** [RGB OUT, DEFLECTION]

– E Board (Component Side) –



- Pattern from the side which enables seeing.
- Pattern from the rear side.

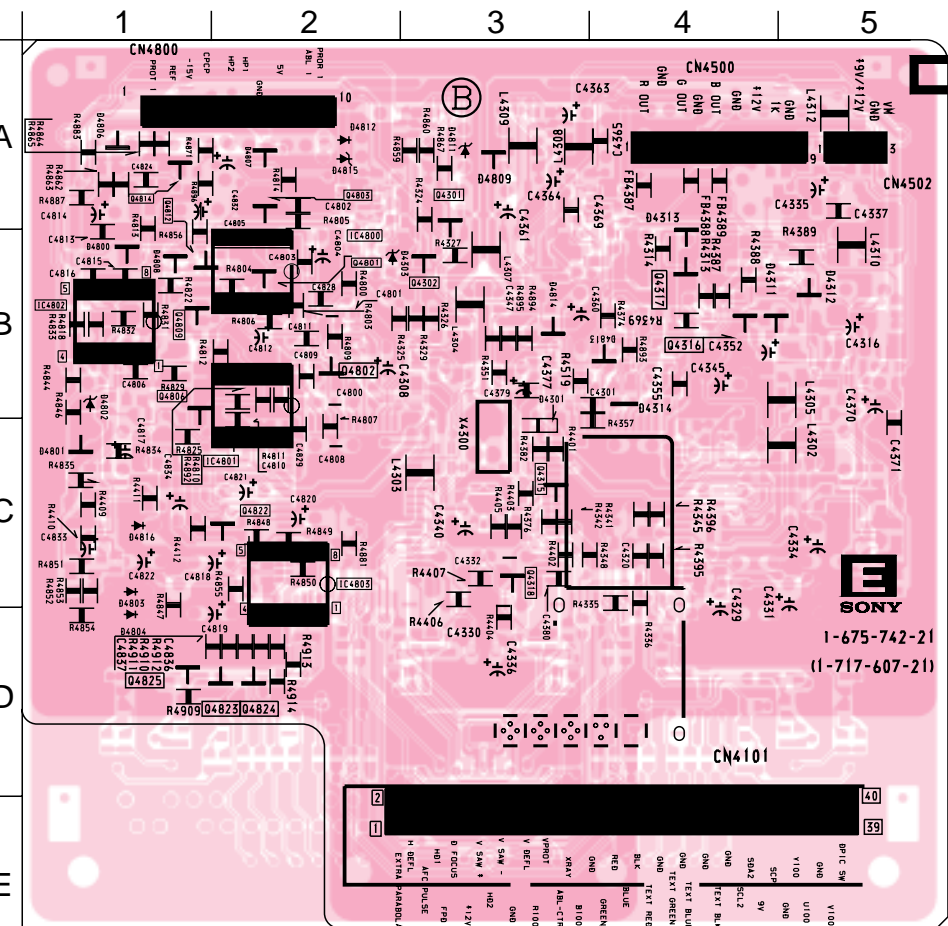
E BOARD (Component Side)

IC	Q4320 D-1	DIODE
IC4301 C-2	Q4321 D-1	D4302 A-2
IC4800 A-4	Q4322 D-2	D4303 B-3
IC4801 C-4	Q4804 B-5	D4304 B-3
IC4802 B-5	Q4805 B-4	D4305 B-12
IC4803 D-4	Q4806 B-2	D4308 D-3
TRANSISTOR	Q4807 C-5	D4309 D-3
	Q4808 B-4	D4802 B-5
	Q4810 B-5	D4805 B-4
	Q4811 B-5	D4806 C-5
	Q4813 A-4	D4811 A-3
Q4303 D-4	Q4815 B-5	D4812 A-4
Q4304 C-1	Q4816 A-3	D4815 A-4
Q4305 A-2	Q4817 A-5	
Q4307 B-2	Q4818 A-5	
Q4308 B-2		
Q4310 B-2		
Q4319 C-1		

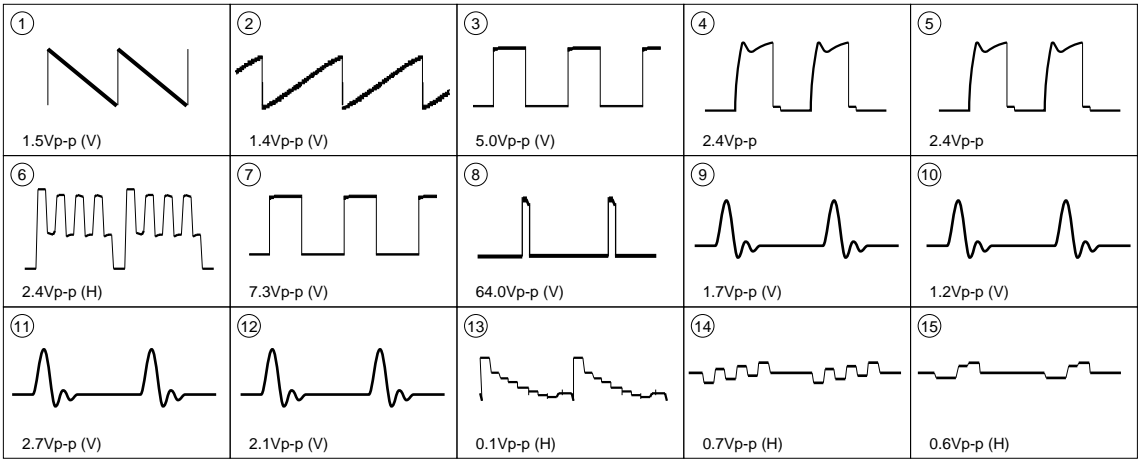
E BOARD (Conductor Side)

IC	Q4806 B-12	D4806 A-1
IC4800 B-2	Q4809 B-1	D4807 A-2
IC4801 C-2	Q4812 A-1	D4808 B-1
IC4802 B-1	Q4814 A-1	D4809 A-3
IC4803 C-2		D4812 A-2
TRANSISTOR	D4301 C-3	D4813 B-4
	D4303 B-3	D4814 B-3
	D4311 B-5	D4815 A-2
	D4312 B-5	D4819 C-3
	D4313 A-4	
Q4301 A-3	D4316 B-4	
Q4302 B-3	D4317 B-4	
Q4315 C-3	D4318 D-3	
Q4316 B-4	D4801 C-1	
Q4317 B-4	D4802 B-1	
Q4318 D-3	D4803 C-1	
Q4801 B-2	D4804 C-1	
Q4802 B-2		

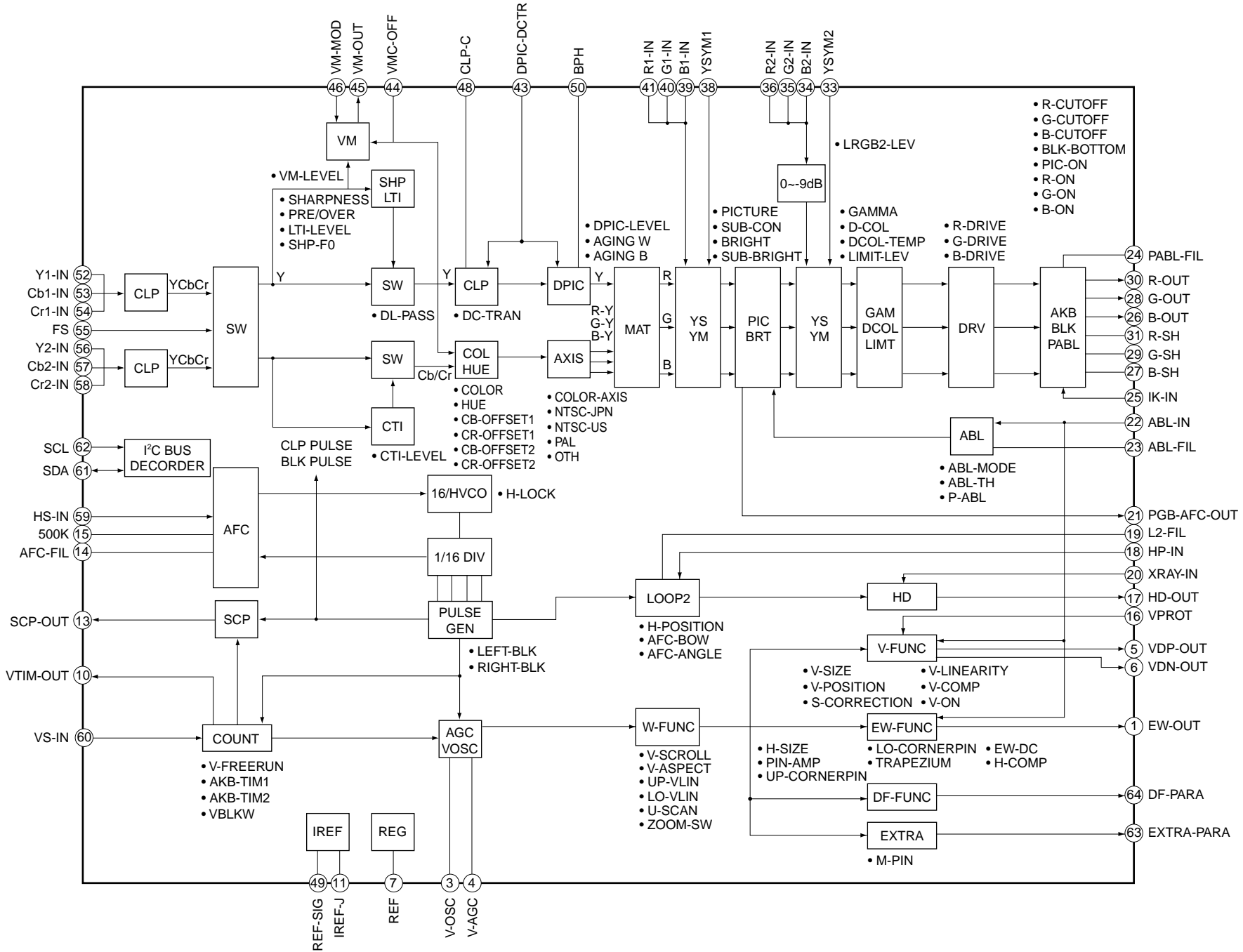
– E Board (Conductor Side) –



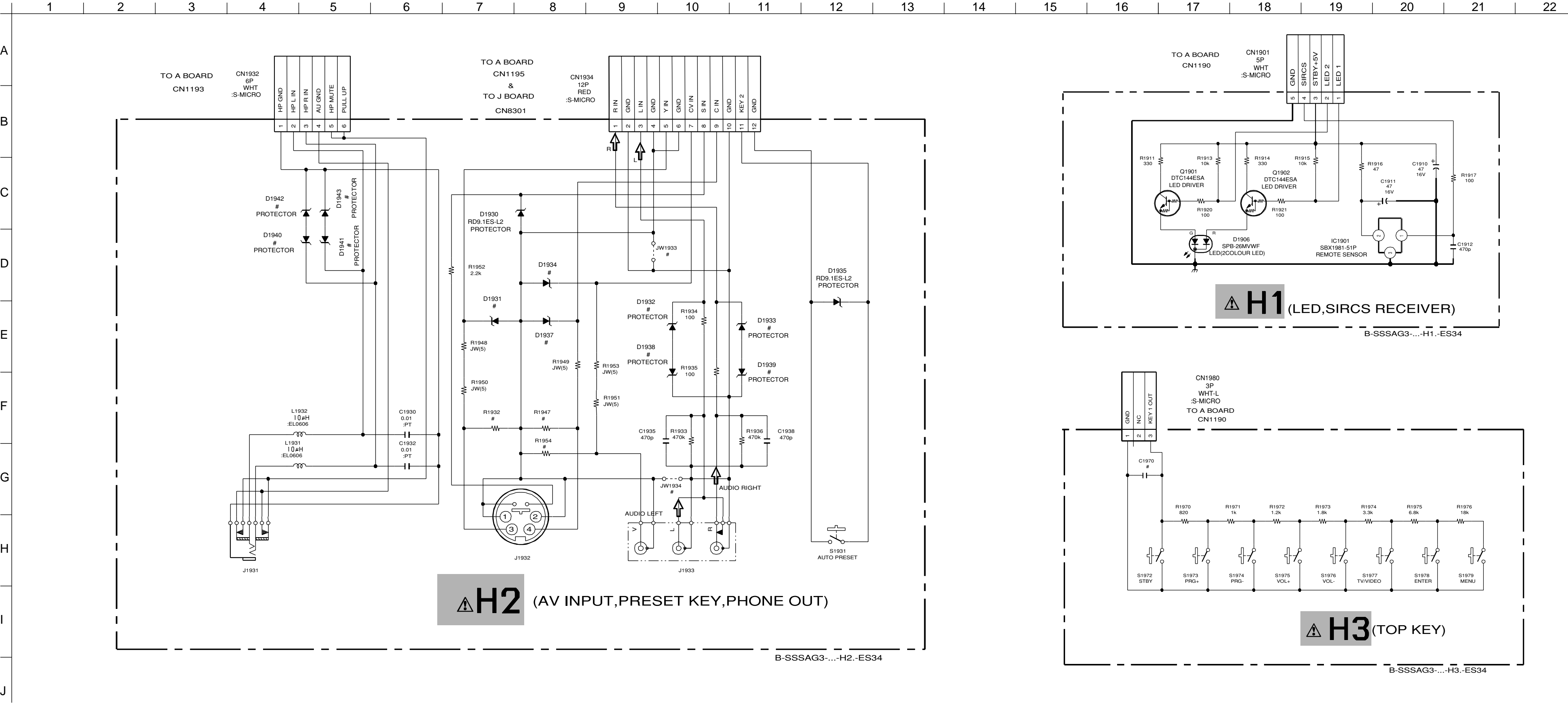
E BOARD WAVEFORMS



E Board IC4301 CXA2100AQ



(6) Schematic Diagrams of H1, H2 and H3 Boards





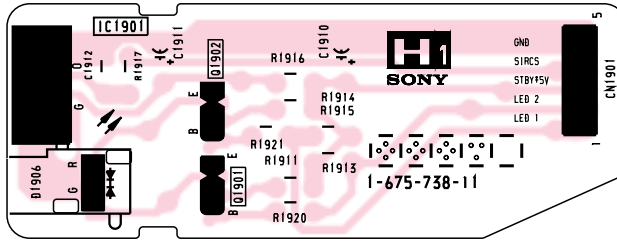
## PRINTED WIRING BOARDS

# H1 [LED, SIRCS RECEIVER]

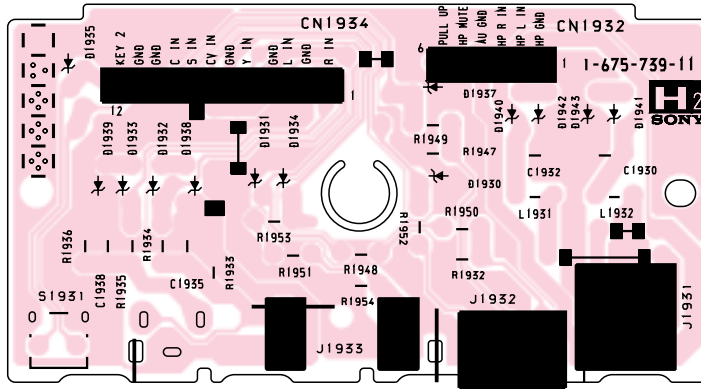
## H2 [AV INPUT, PRESET KEY, PHONE OUT]

**H3** [TOP KEY]

– H1 Board –



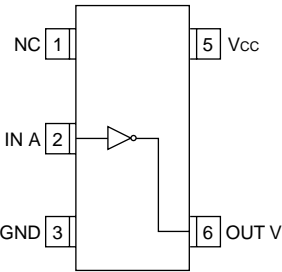
**– H2 Board –**



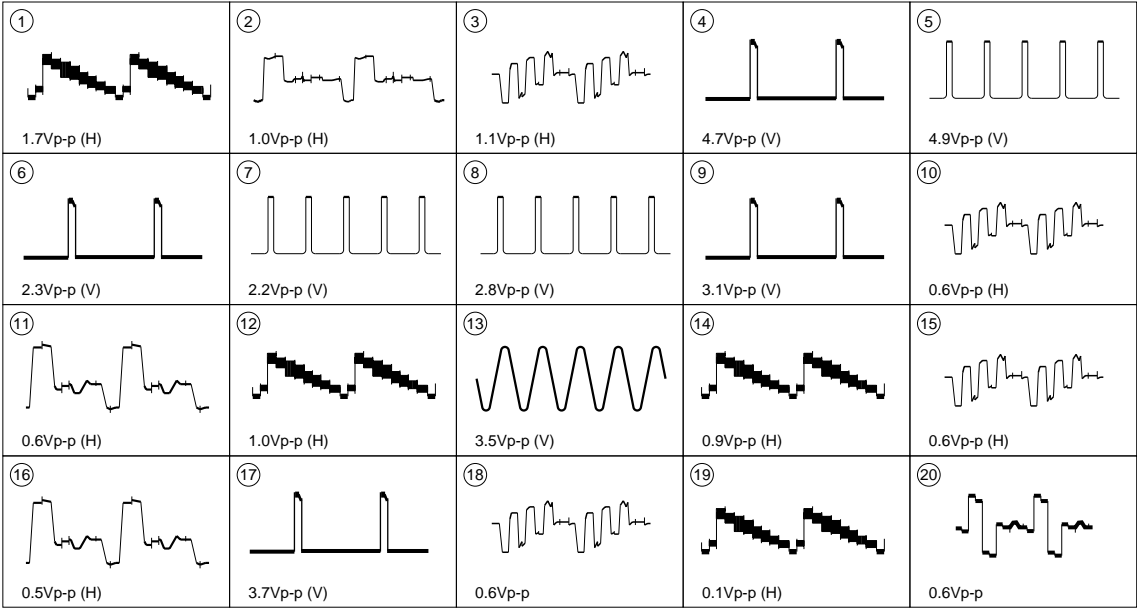
**– H3 Board –**



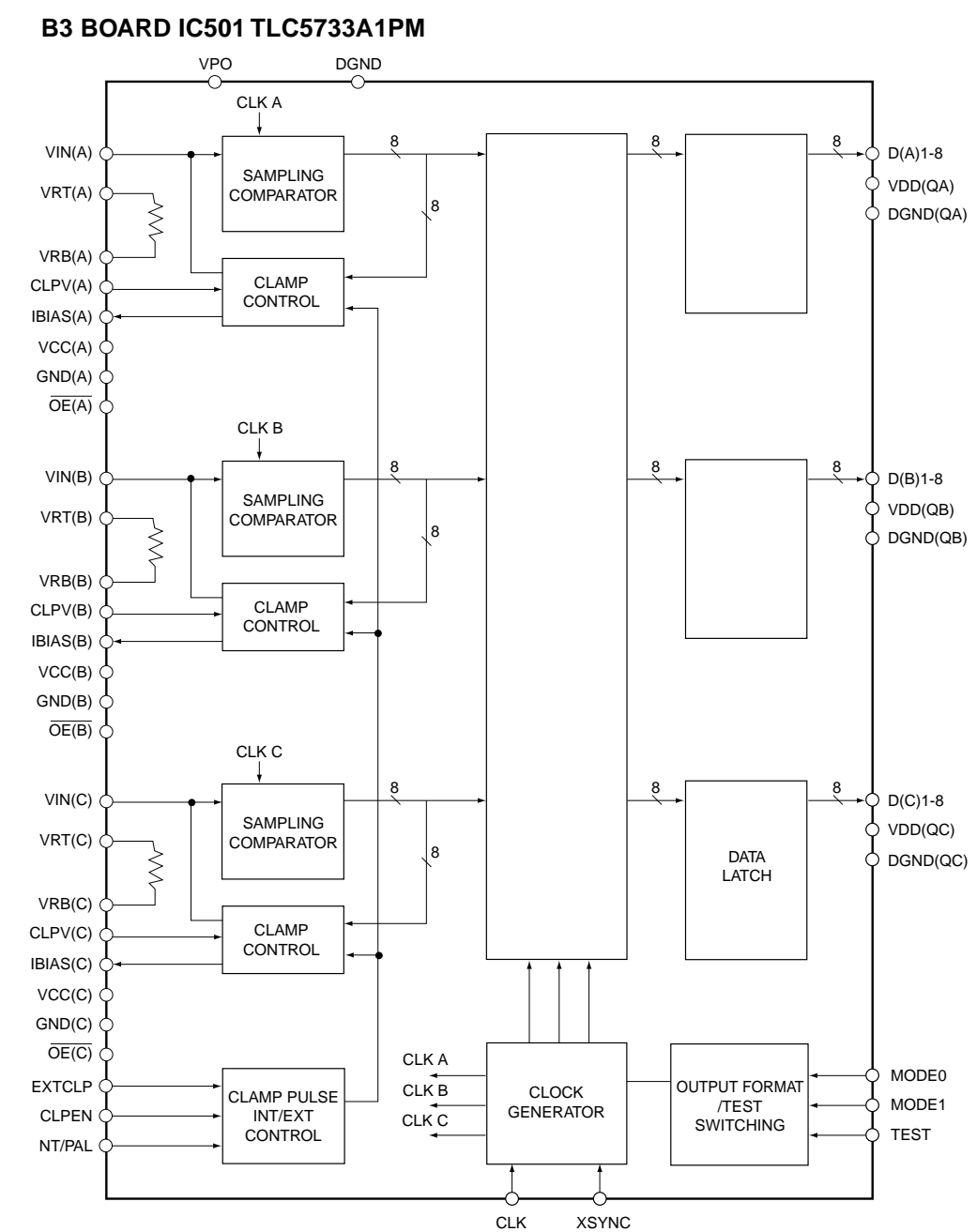
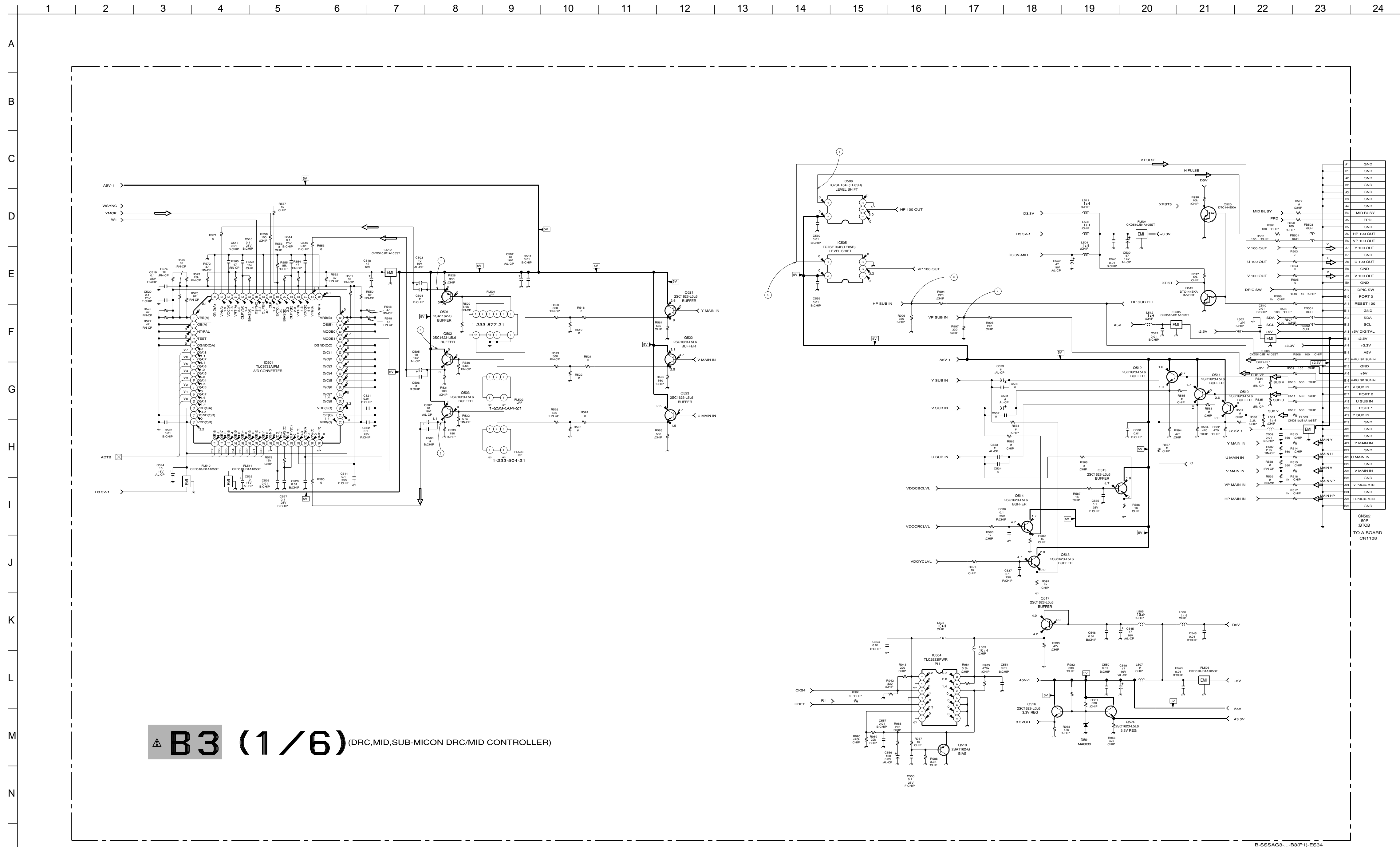
B3 BOARD IC309, IC505 AND IC506 TC7SET04F (TE85R)



B3 BOARD WAVEFORMS



**(7) Schematic Diagram of B3 (1/6) Board**





1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----



– B3 Board (Component Side) –

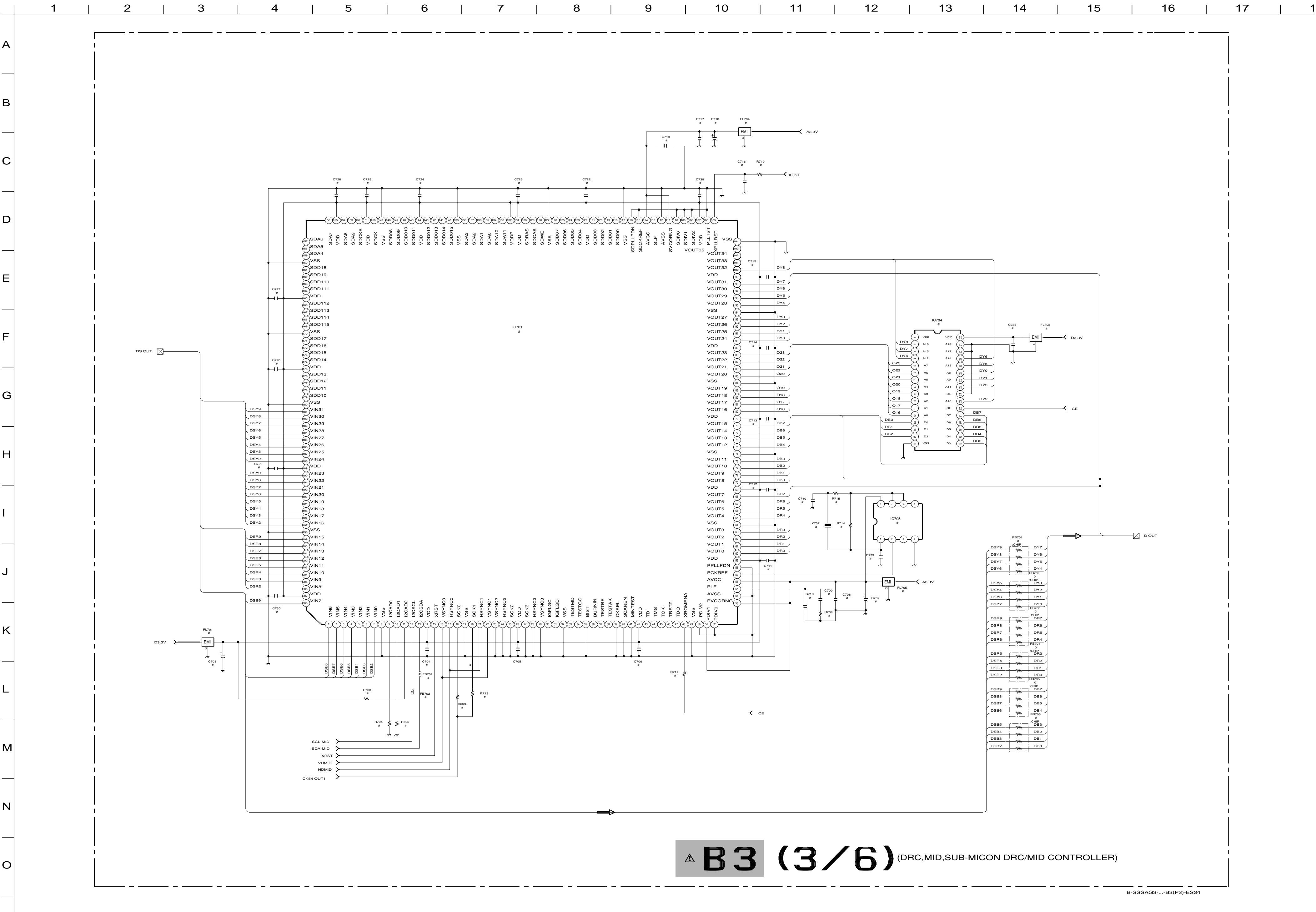


B3 BOARD (Conductor Side)			
IC		Q519	D-6
IC304	A-1	Q524	D-6
IC309	B-2	Q601	A-7
IC311	C-1	Q602	A-7
IC604	C-5	Q901	D-5
IC704	A-4	Q902	D-5
IC705	B-4	Q903	C-6
IC803	C-3	Q904	A-2
IC903	A-3	Q905	A-2
TRANSISTOR		Q906	A-2
		DIODE	
Q513	D-7		
Q514	D-7	D301	A-7
Q515	C-7	D302	B-5
Q516	E-6	D901	B-11
Q517	B-5		
Q518	A-4		

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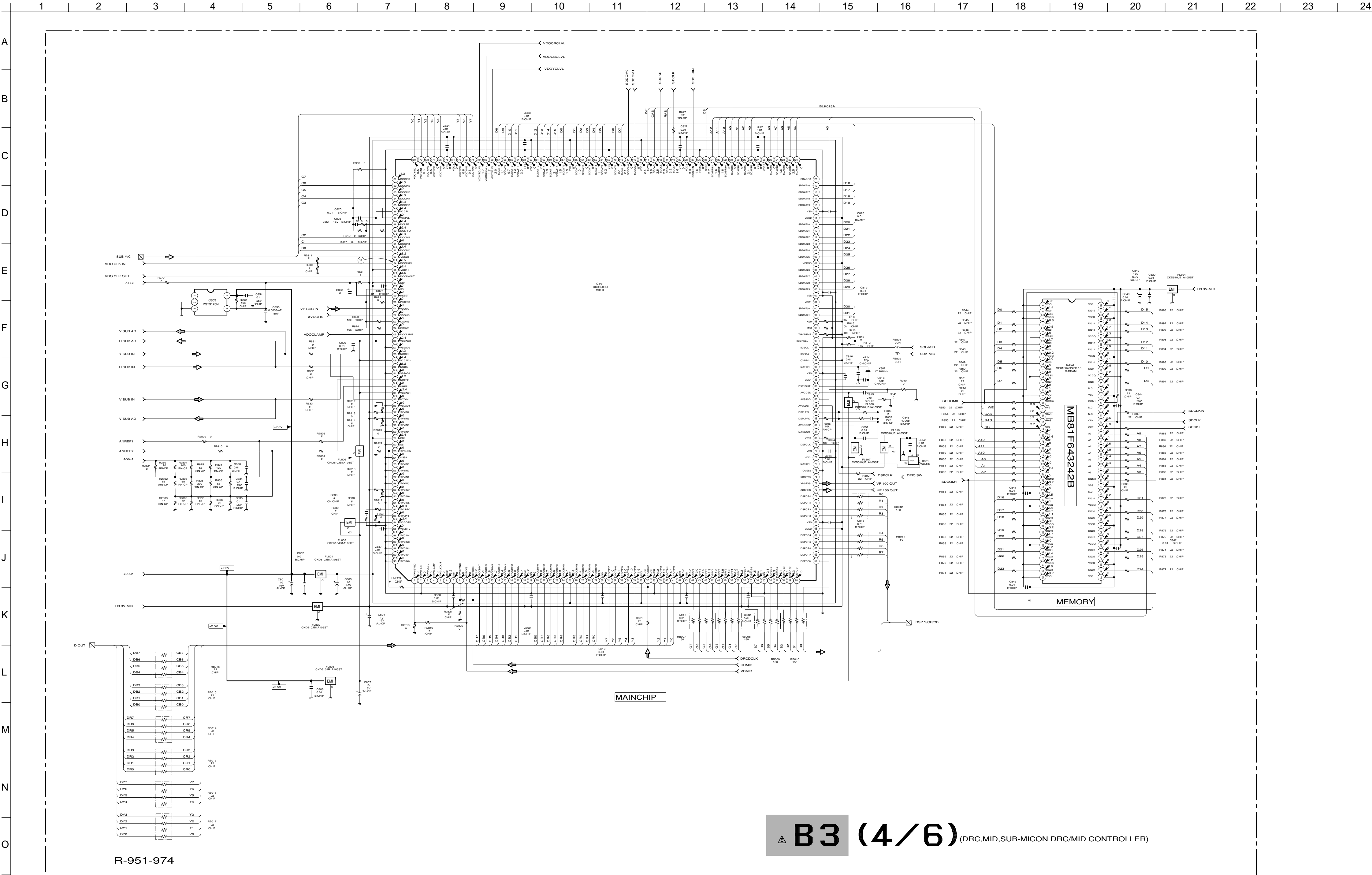


(9) Schematic Diagram of B3 (3/6) Board



B-SSSAG3-...B3(P3)-ES34

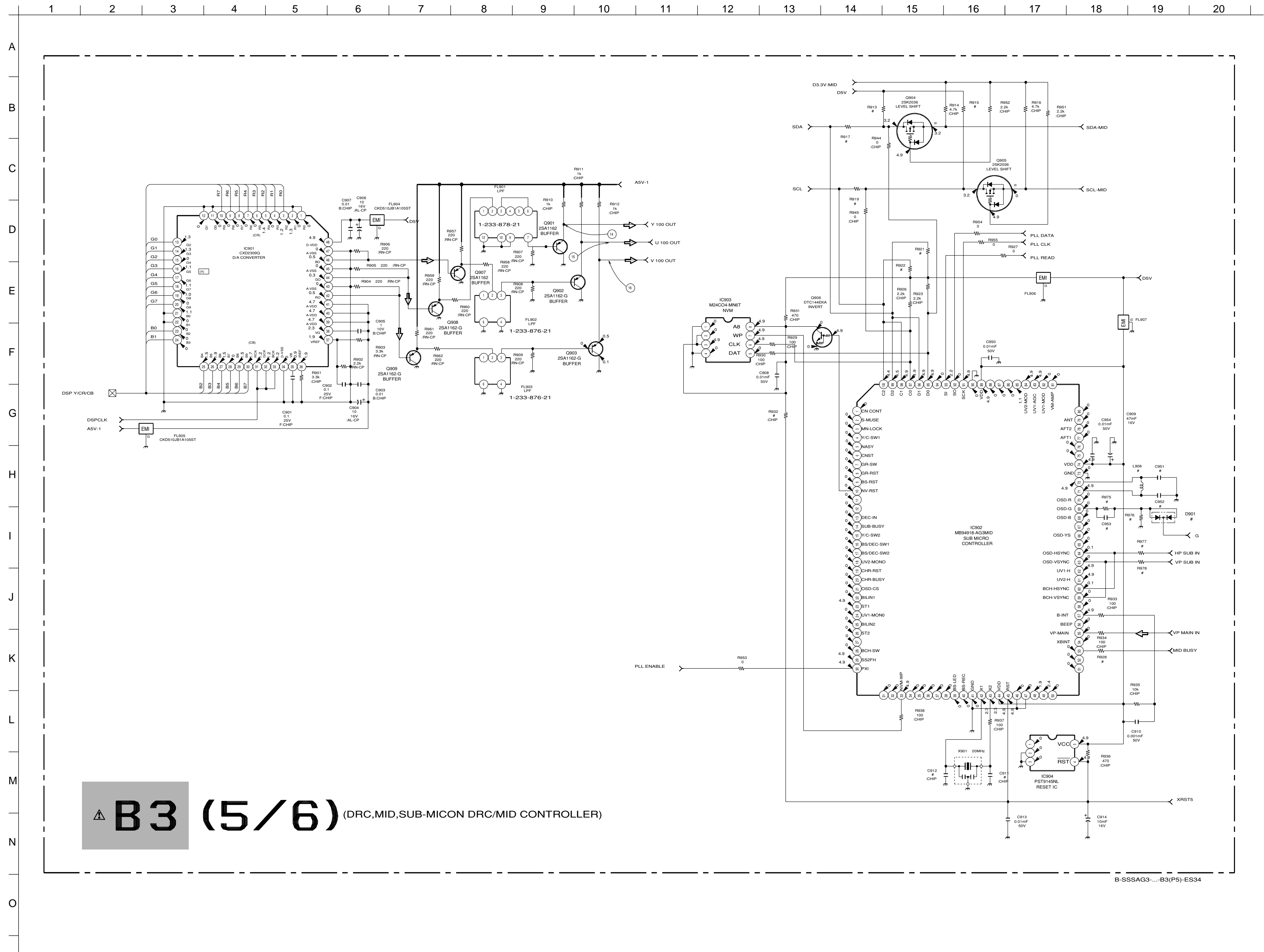
(10) Schematic Diagram of B3 (4/6) Board



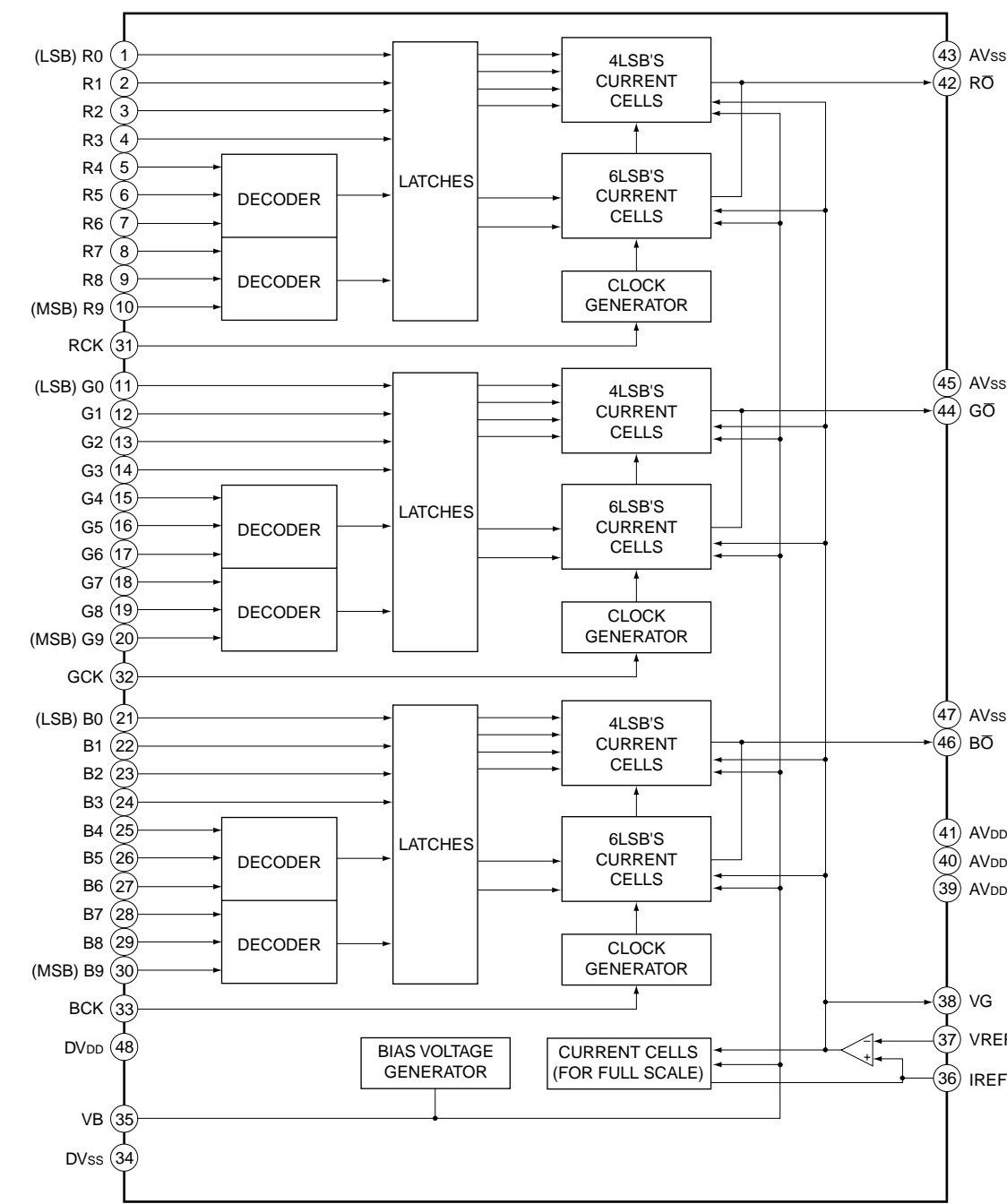
**B3 (4/6)** (DRC,MID,SUB-MICON DRC/MID CONTROLLER)

R-951-974

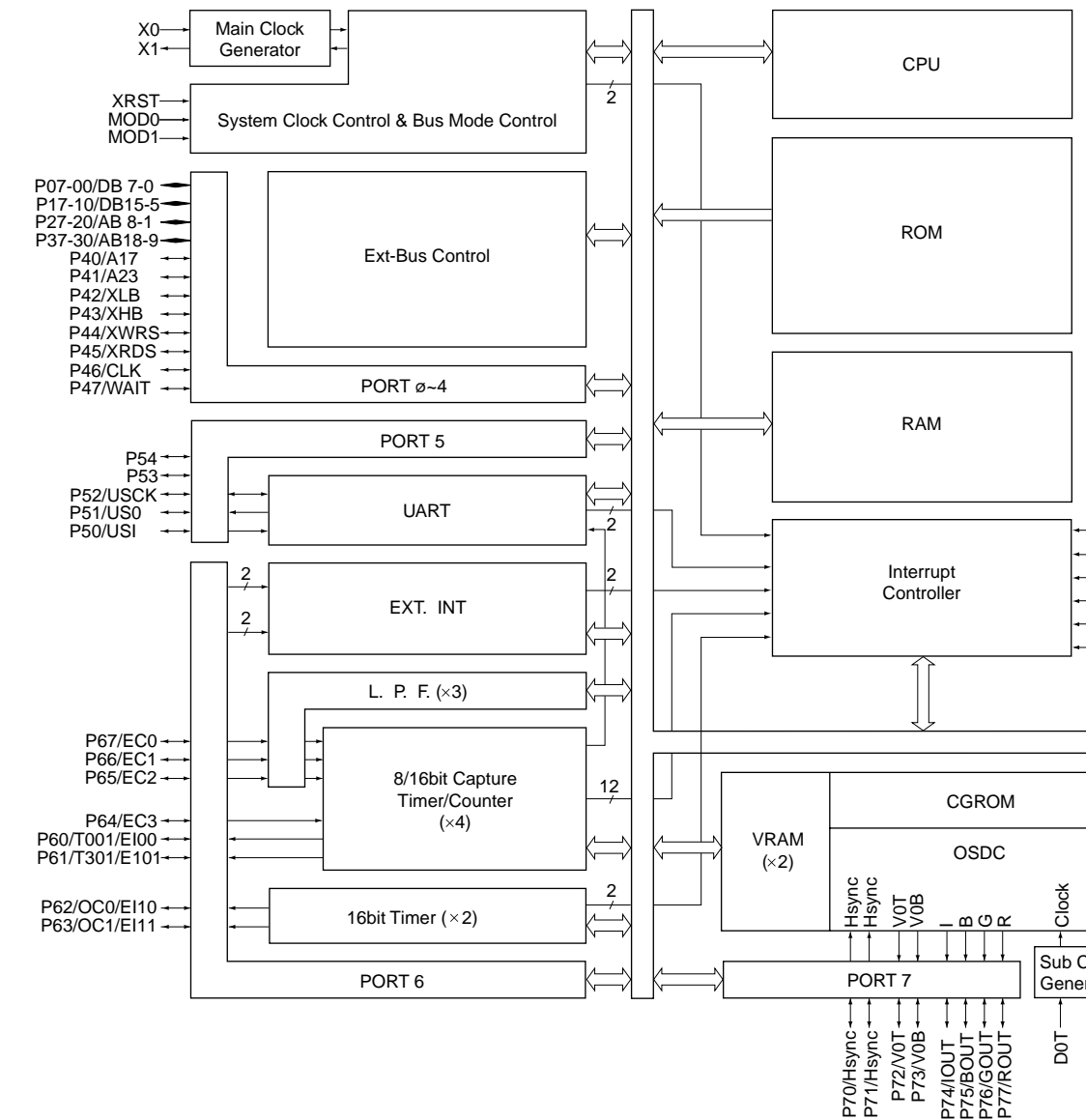
(11) Schematic Diagram of B3 (5/6) Board

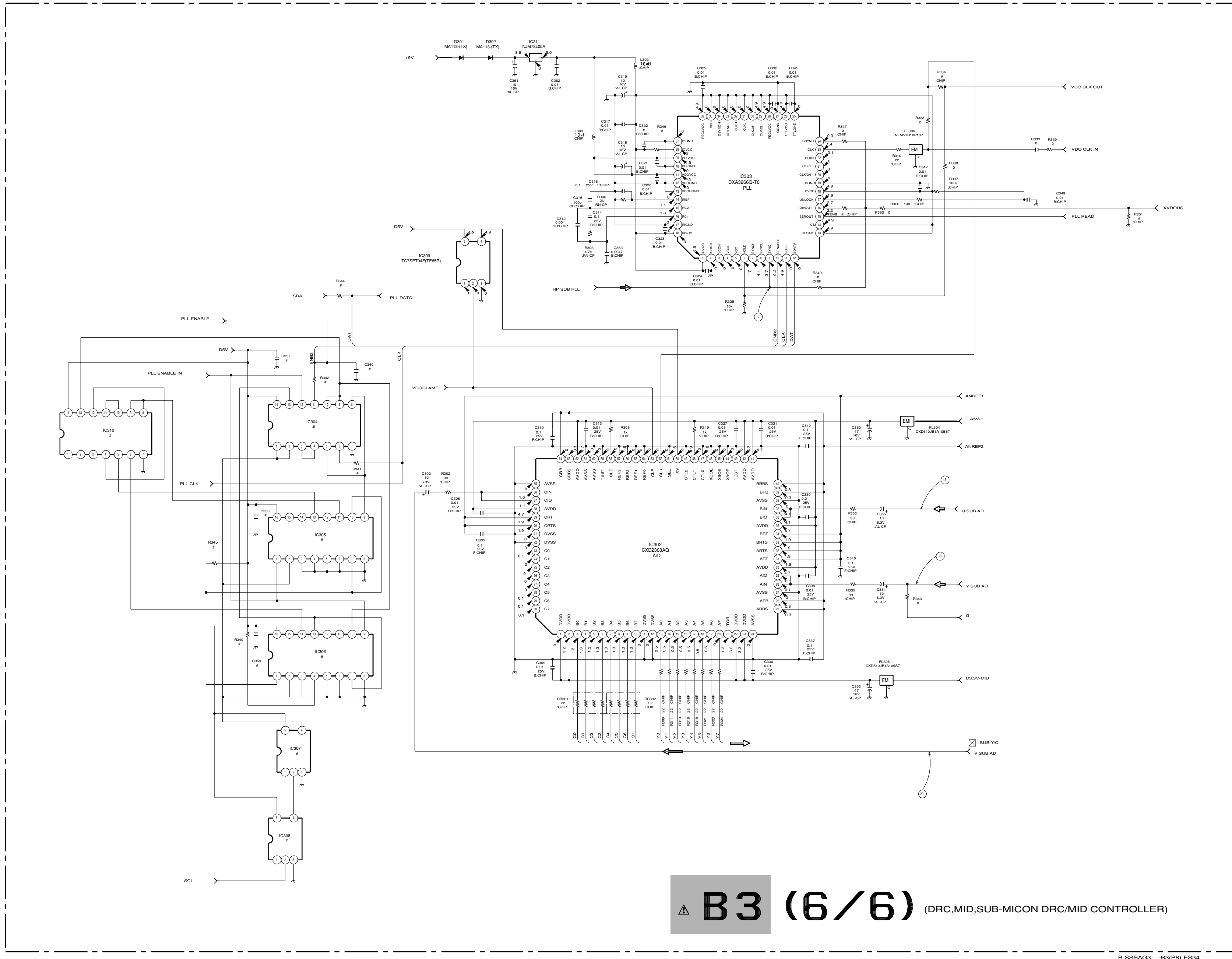


**B3 BOARD IC901 CXD2309Q**

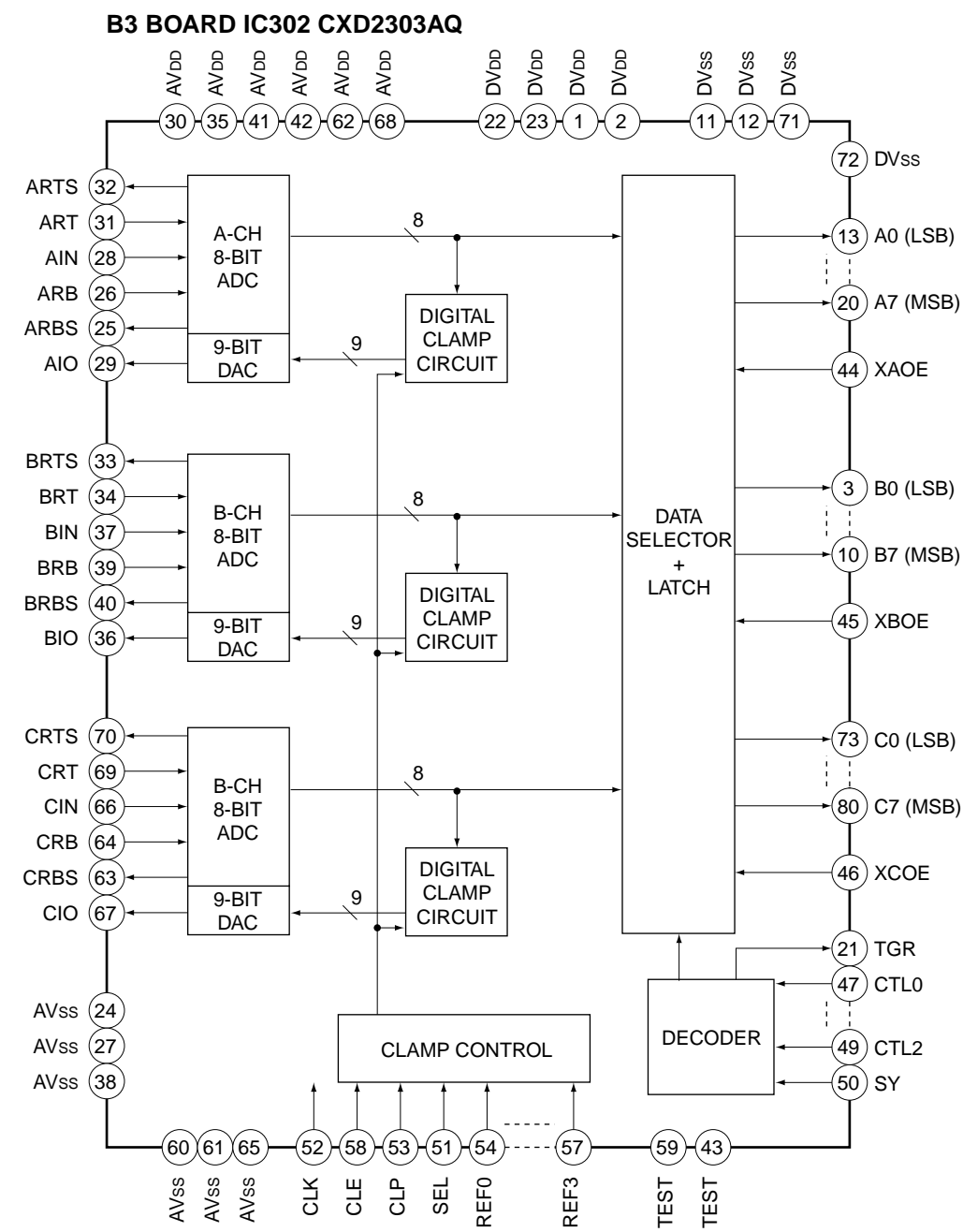

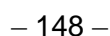


**B3 BOARD IC902 MB94918-AG3M1D**





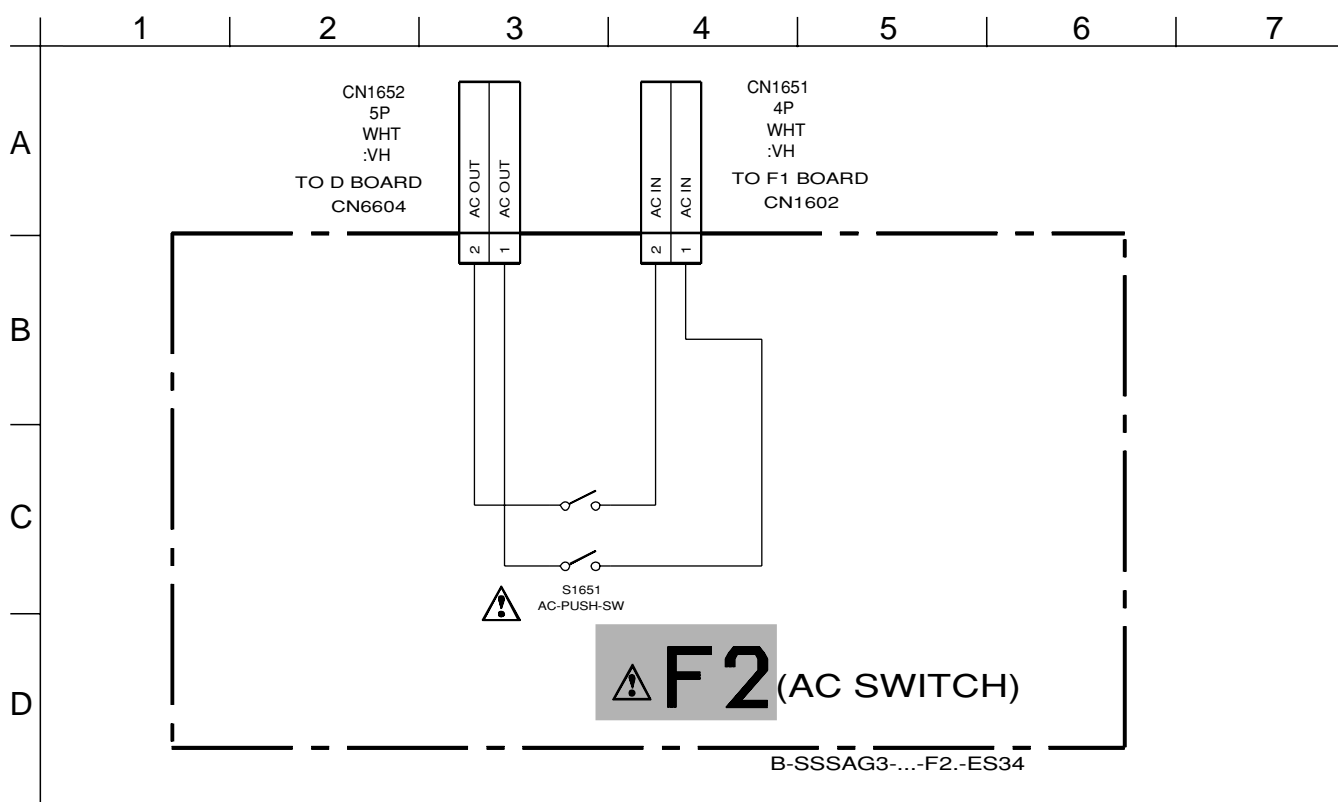
– 147 –



The diagram illustrates the internal architecture of a PLL and Frequency Synthesizer. It features a central feedback loop involving a Phase Detector, Charge Pump, Fine Delay, VCO, and a Programmable Counter. The system is controlled by various inputs including VCO (TTL/PECL), SYNC (TTL/PECL), and HOLD (TTL). It also includes a DAC, CONTROL REGISTER, READ OUT TTLOUT, SEROUT, DIVOUT, TLOAD, SYNTHESIZER POWER SAVE, WHOLE CHIP POWER SAVE, and UNLOCK DETECT. The outputs include DSYN (TTL/PECL), CLK (TTL/PECL), CLK/2 (TTL/PECL), and UNLOCK. The diagram is labeled with various control signals and data paths, including RC1, RC2, and C3.



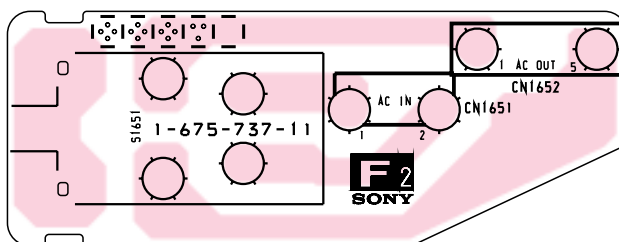
### (13) Schematic Diagram of F2 Board



### PRINTED WIRING BOARD

**F2** [AC SWITCH]

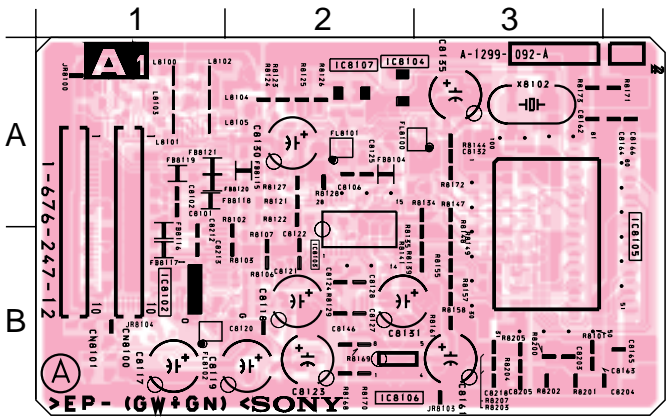
### – F2 Board –



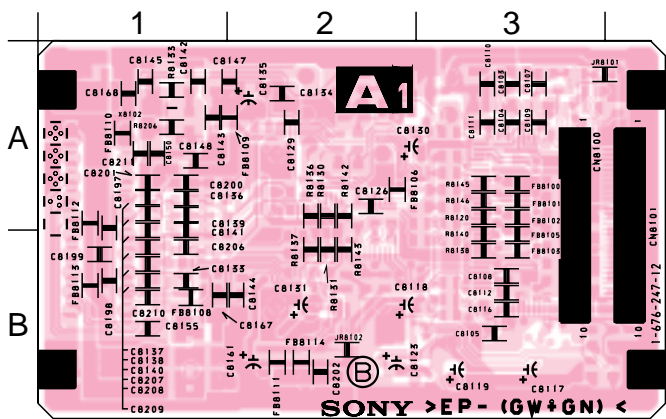
PRINTED WIRING BOARDS

**A1** [AUDIO DSP]

– A1 Board (Component Side) –



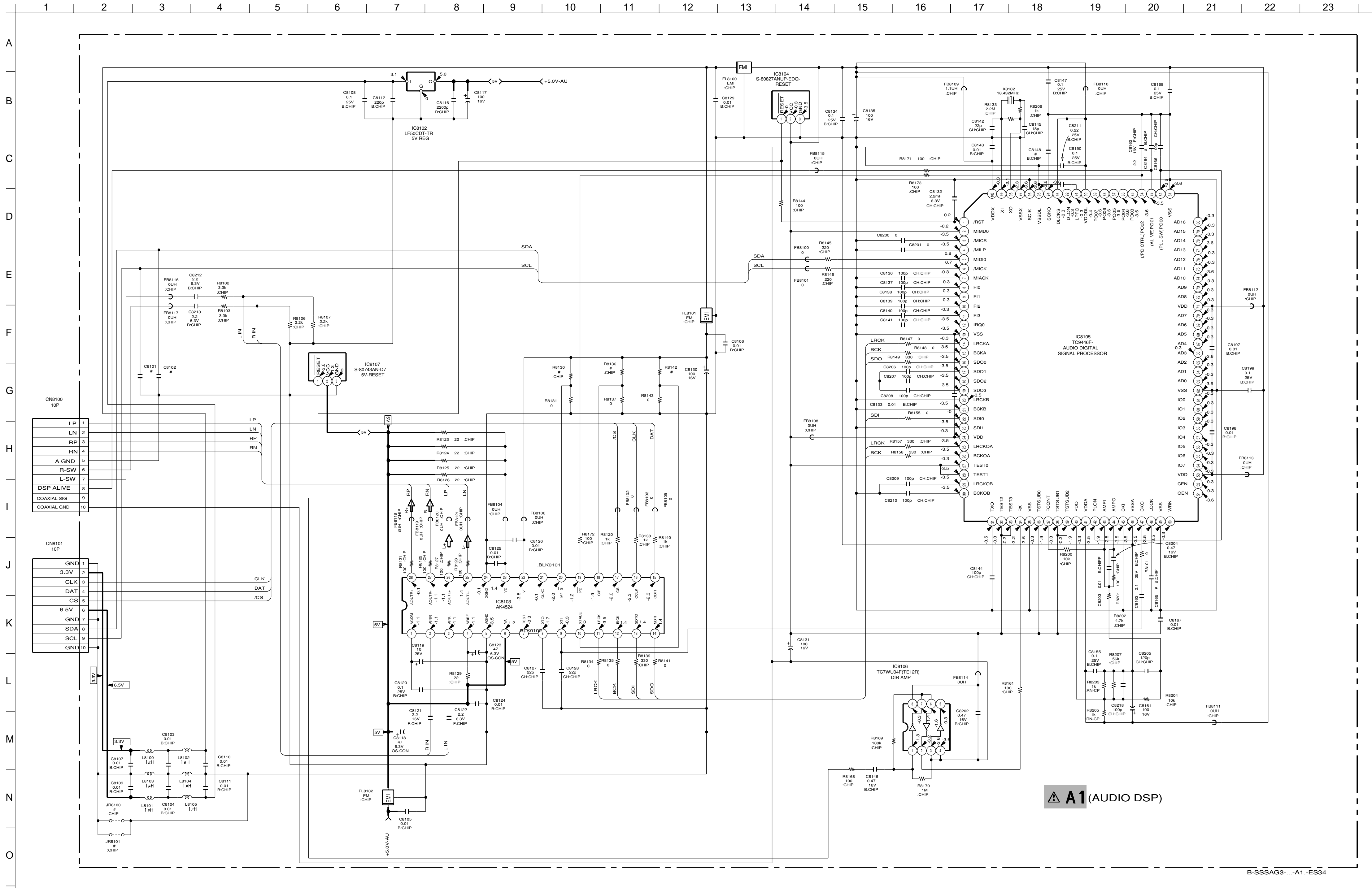
– A1 Board (Conductor Side) –



A1 BOARD (Component Side)

IC	
IC8102	B-1
IC8104	A-2
IC8105	B-4
IC8106	B-3
IC8108	B-1

(14) Schematic Diagram of A1 Board

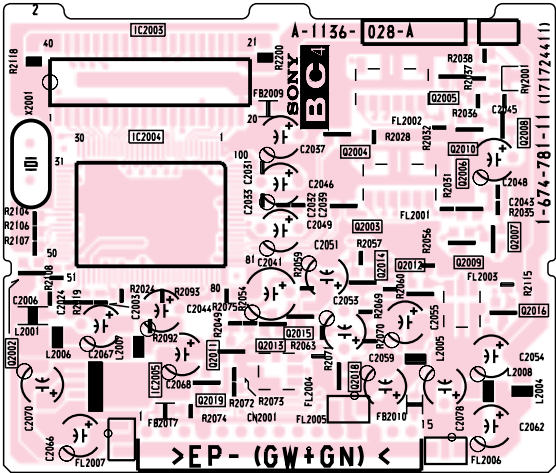


A
B
C
D
E
F
G
H
I
J
K
L
M
N
O

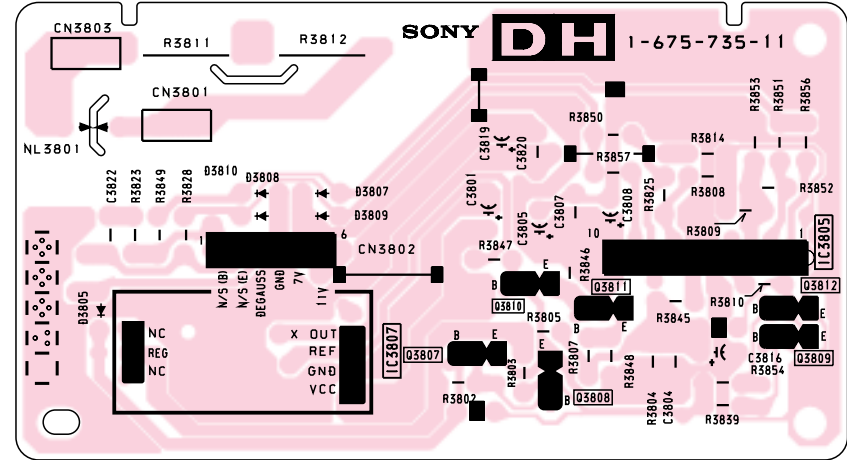
PRINTED WIRING BOARDS

**BC4** [Y/C SEP]      **DH** [MAGNETIC FIELD CORRECTION]      **V** [TELETEXT] (KV-ES34M31/M61 ONLY)

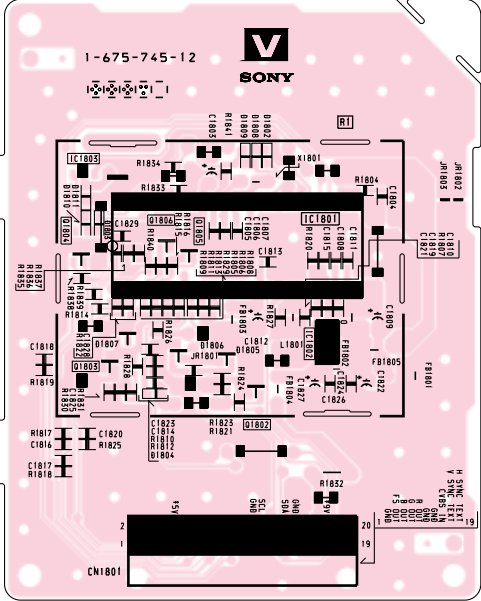
– BC4 Board –



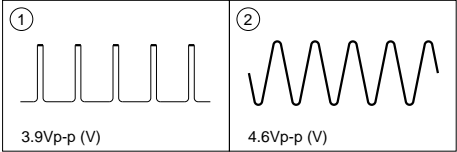
– DH Board –



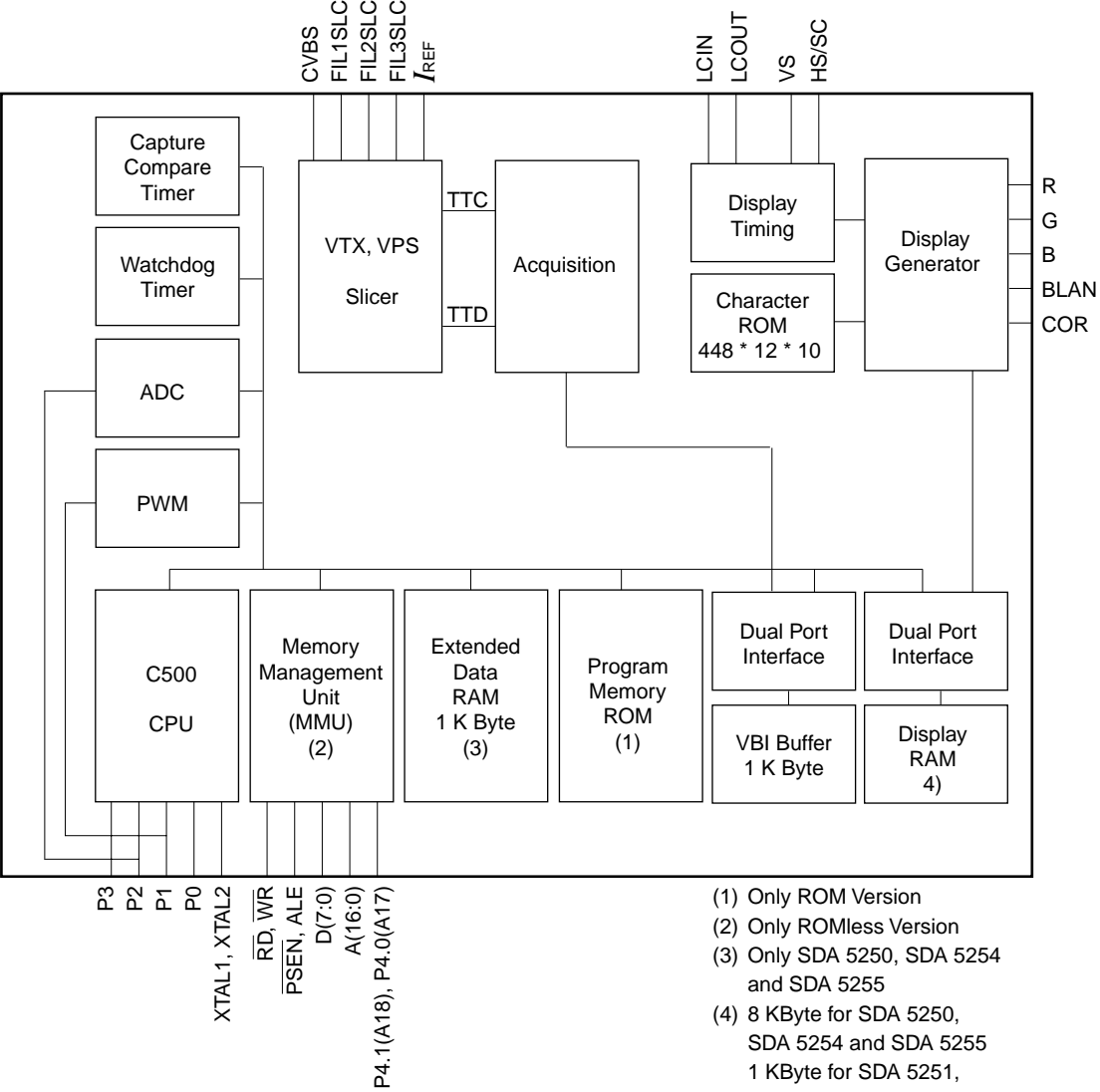
– V Board – (KV-ES34M31/M61 ONLY)



V BOARD WAVEFORMS

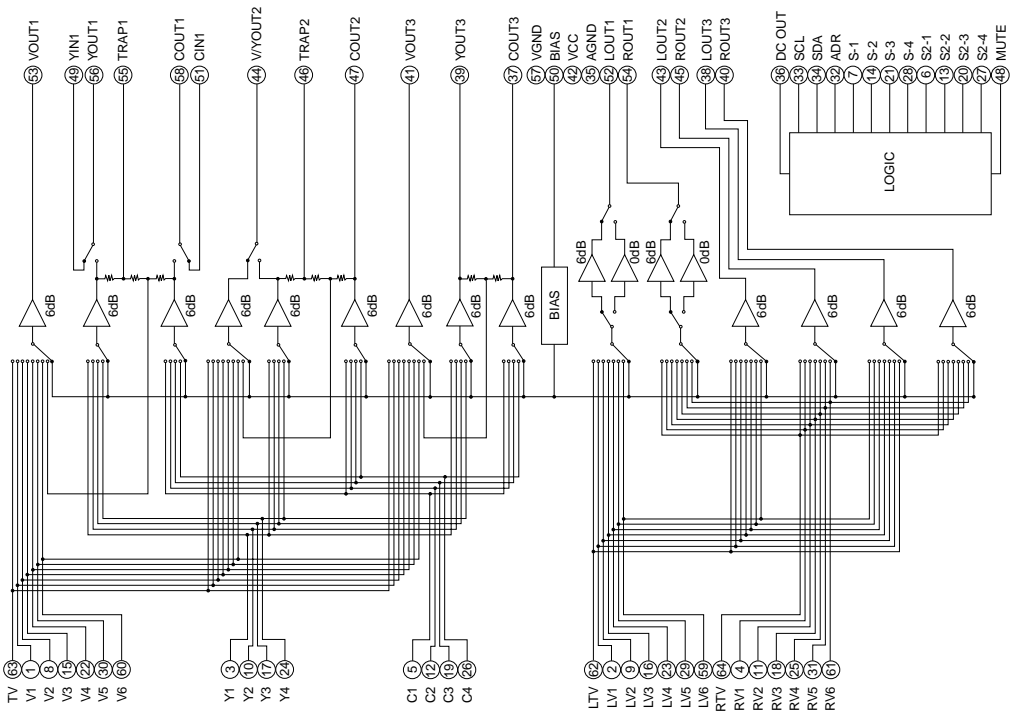


V Board IC1801 SDA5254-2B006

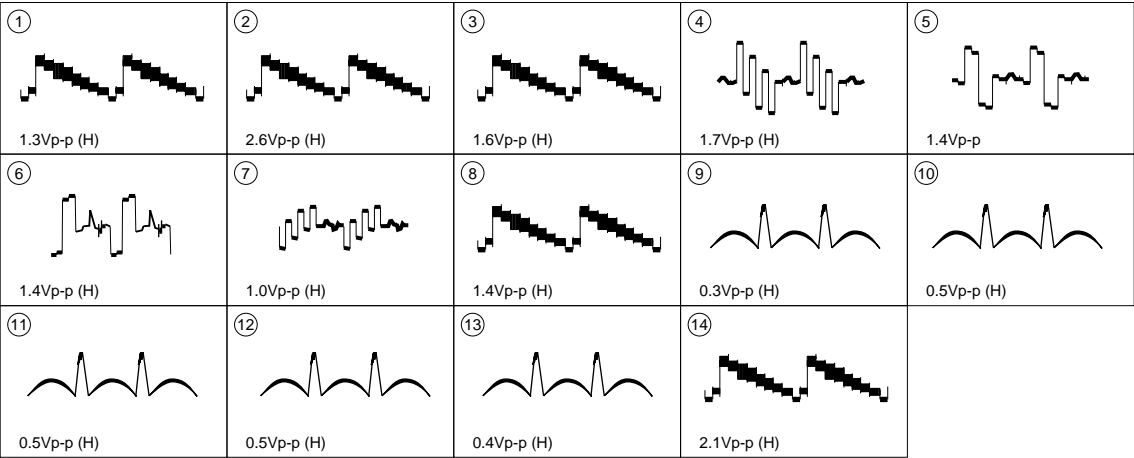


- (1) Only ROM Version
- (2) Only ROMless Version
- (3) Only SDA 5250, SDA 5254 and SDA 5255
- (4) 8 KByte for SDA 5250, SDA 5254 and SDA 5255  
1 KByte for SDA 5251, SDA 5252

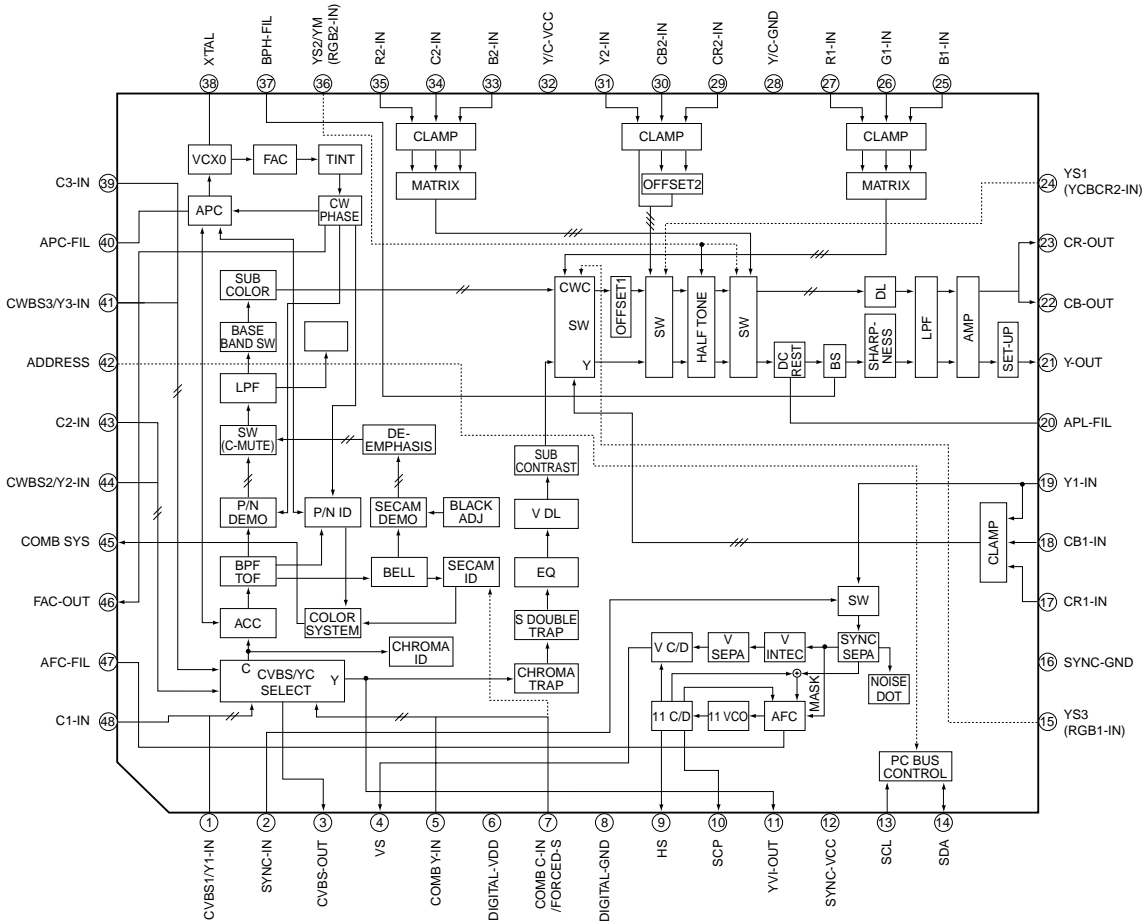
J Board IC8302 CXA2069Q



J BOARD WAVEFORMS

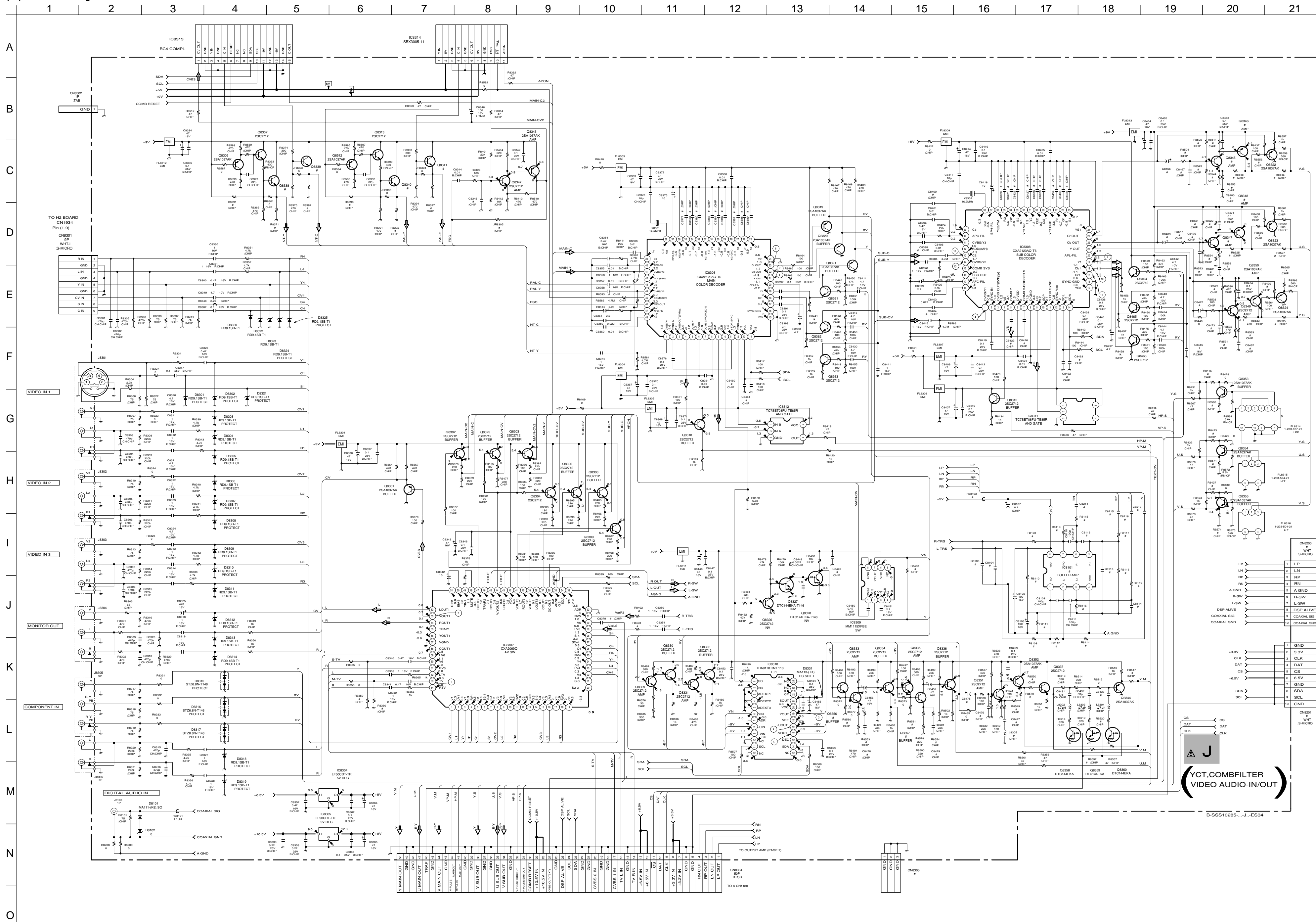


J Board IC8306 CXA2123AQ-T6





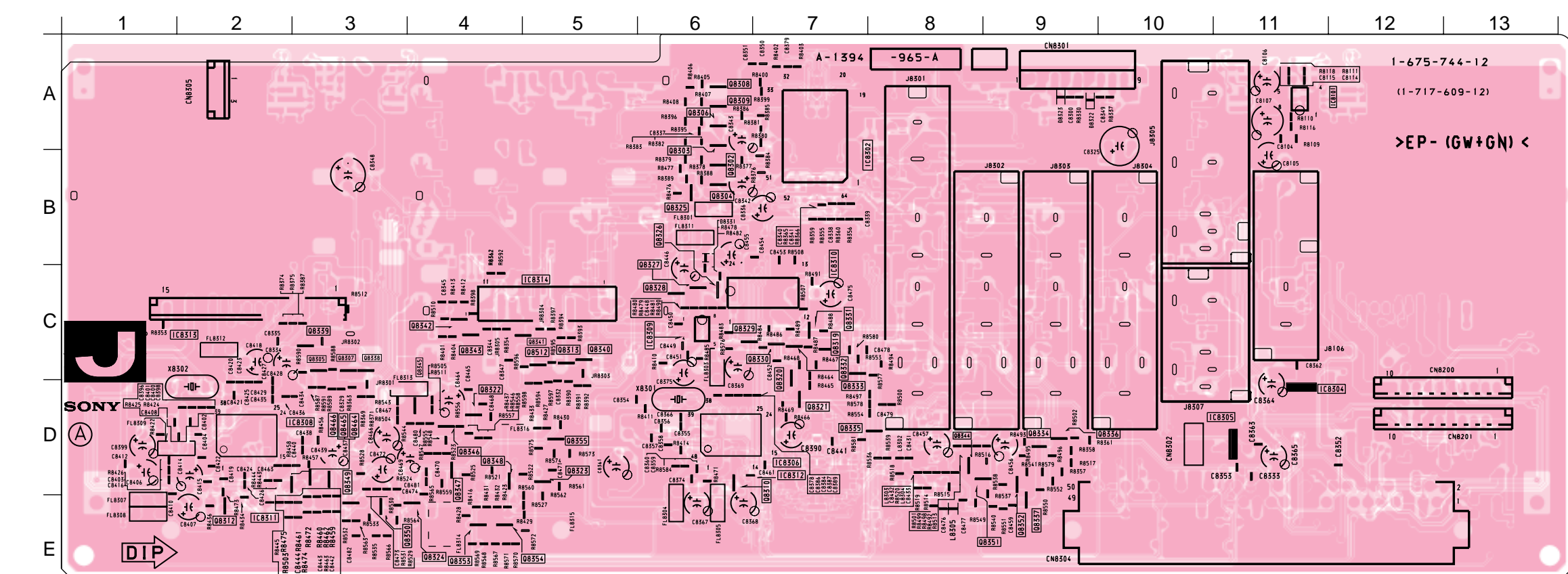
(16) Schematic Diagram of J Board



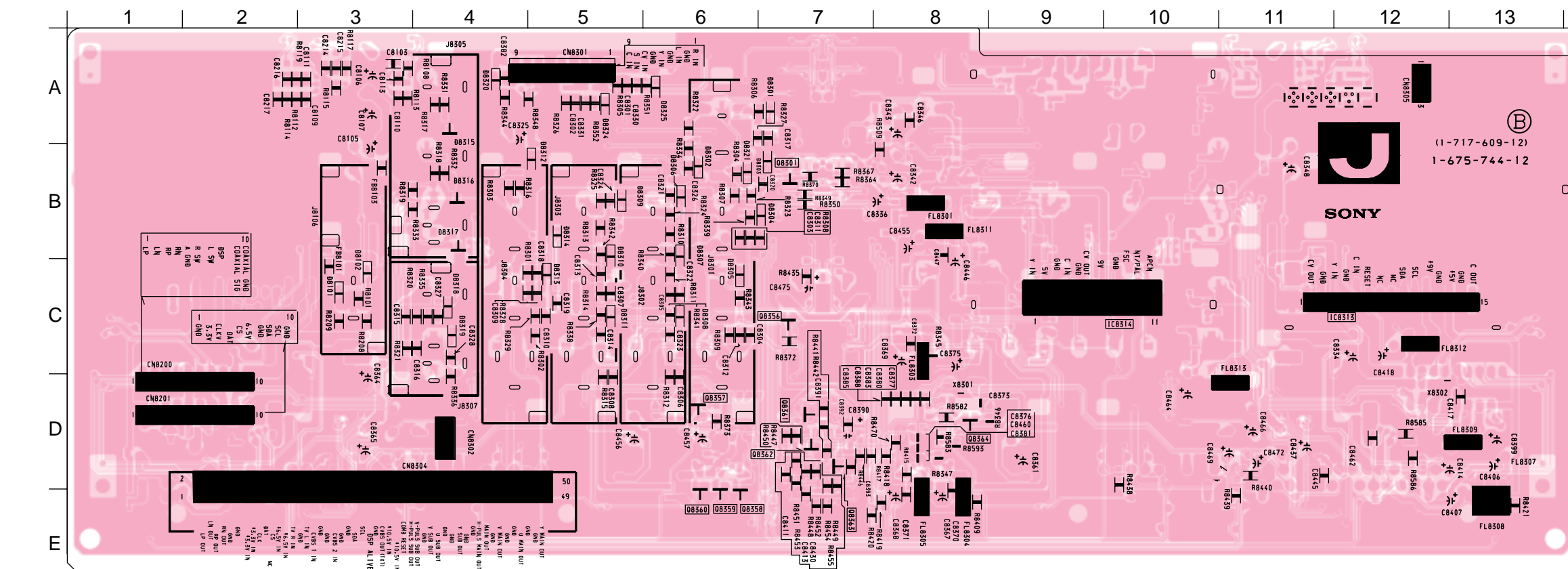
PRINTED WIRING BOARDS

J [YCT, COMB FILTER, VIDEO/AUDIO-IN/OUT]

- J Board (Component Side) -



- J Board (Conductor Side) -



- Pattern from the side which enables seeing.
- Pattern from the rear side.

J BOARD (Component Side)

IC	Q8307 C-3	Q8339 C-3
IC0302 A-8	Q8308 A-6	Q8340 C-5
IC0309 A-6	Q8310 D-7	Q8341 C-5
IC8102 E-13	Q8312 E-3	Q8342 C-4
IC8103 B-13	Q8313 C-5	Q8343 C-4
IC8105 A-13	Q8319 C-7	Q8344 D-8
IC8106 C-12	Q8320 C-7	Q8345 C-3
IC8107 D-12	Q8321 D-7	Q8346 D-4
IC8304 D-12	Q8322 D-4	Q8347 D-4
IC8305 D-11	Q8323 D-5	Q8348 D-5
IC8306 D-7	Q8324 D-4	Q8349 E-3
IC8308 D-2	Q8325 B-6	Q8350 D-4
IC8309 C-6	Q8326 B-6	Q8351 D-9
IC8310 B-7	Q8327 B-6	Q8352 E-9
IC8311 E-3	Q8328 C-6	Q8353 E-5
IC8312 D-7	Q8329 C-7	Q8354 E-5
IC8313 C-2	Q8330 C-7	Q8355 D-5
IC8314 B-5	Q8331 C-7	
TRANSISTOR	Q8332 C-7	
	Q8333 C-7	
	Q8334 D-9	
Q8302 A-6	Q8335 D-7	
Q8303 A-6	Q8336 D-7	
Q8304 B-6	Q8337 D-10	
Q8305 C-3	Q8338 E-9	
Q8306 A-6	Q8339 C-3	

J BOARD (Conductor Side)

IC	D8302 B-6
IC8104 B-2	D8303 B-7
IC8313 C-12	D8304 B-7
IC8314 C-10	D8305 C-6
TRANSISTOR	D8306 B-6
	D8307 C-6
Q8301 B-7	D8308 C-6
Q8356 C-7	D8309 B-6
Q8357 D-6	D8310 B-5
Q8358 D-7	D8311 C-5
Q8359 E-6	D8313 C-5
Q8360 E-6	D8314 B-5
	D8315 A-4
	D8316 B-4
	D8317 E-6
DIODE	D8318 C-4
	D8319 C-4
D8101 C-3	D8320 A-4
D8102 C-3	D8321 B-6
D8301 A-4	D8325 A-4

Schematic diagram

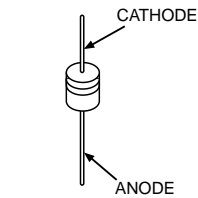
J board



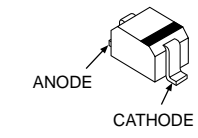
6-5. SEMICONDUCTORS

DIODE

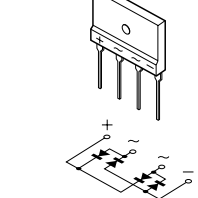
D1N54  
ERA38-06  
ERA85-009  
RD10ESB2  
RD12ES-B2  
RD13ES-B2  
RD15ES-B2  
RD18ESB2  
RD2.2ES-B  
RD2.7ESB2  
RD22ESB  
RD3.6ES-B1  
RD3.9ES-B2  
RD30ESB2  
RD4.7ESB2  
RD5.6ES-B  
RD6.8ES-B2  
RD7.5ESB2  
1SS119-25



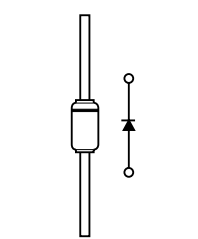
DTZ9.1  
MA111-(K8).S0  
MA113-(TX)  
RD3.0B2  
RD5.6SB3  
RD9.1S-B



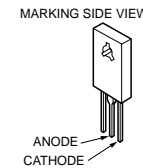
D4SB60L



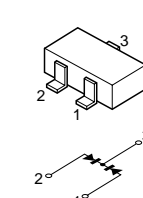
RD9.1ES-L2



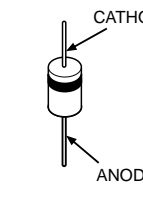
D1NL20U-TR



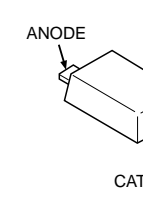
DAN202K



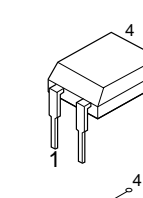
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GP08D  
HSS63TD  
RGP02-20EL-6394



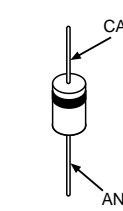
MA8039



ON3171-R

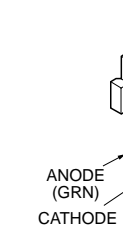


S3L20UF4



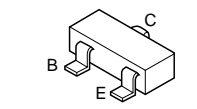
LED

SPB-26MVWF

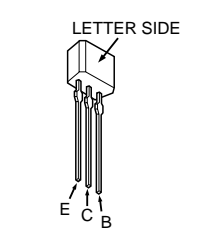


TRANSISTOR

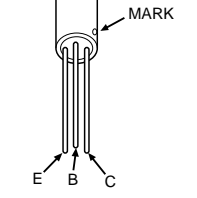
DTA144EKA-T146  
DTC114EK  
2SA1037AK-T146-R  
2SA1162-G  
2SA1776TV2Q  
2SC1623-LSL6  
2SC2712-YG  
2SD601A-Q-TX  
2SD601-Q-TX



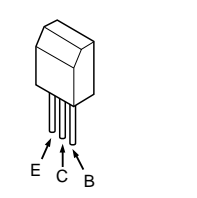
DTC144ESA  
TR DTC144ESA  
2SA1175-HFE  
2SC2785-HFE



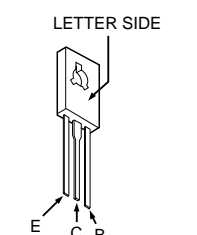
2SA2005



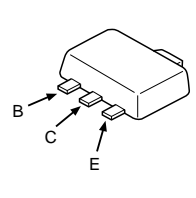
2SB733-34  
2SD774-34



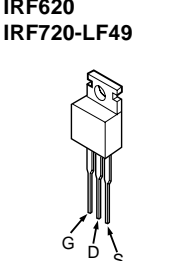
2SC3840(3)



2SK2036(TE85L)  
2SK2251-01-F19



IRF620  
IRF720-LF49



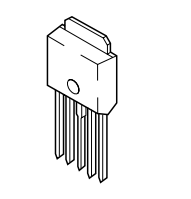
IC

AK4524  
LF50CDT-TR  
MM1115XFB  
NJM4560M  
TC7WU04F  
TDA7315D013TR  
uPC4558G2

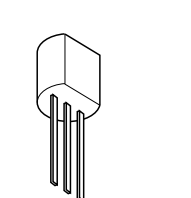


Dual In-line Package  
Pin 6—98

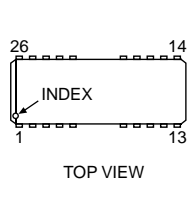
LA6510



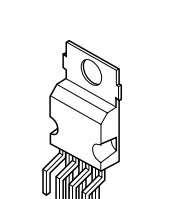
LM78L05ACZ



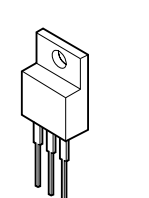
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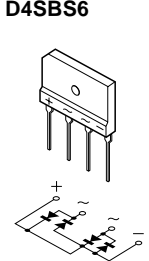
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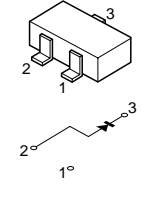
TA7805S



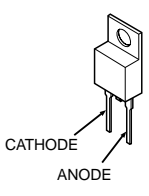
D4SBL20U  
D4SBS6



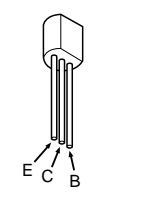
MA3062M-TX  
MA3091  
STZ6.8N-T146



D5S4M



2SC2500-B

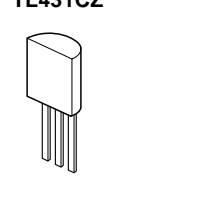


CA0005AD  
CA0007AD  
NJM3404AD  
TOP209P  
UPC393C  
UPC358C

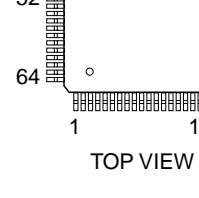


Dual In-line Package  
Pin 6—98

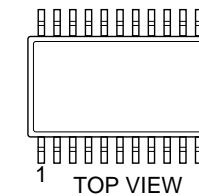
TL431CZ



TLC5733AIPM

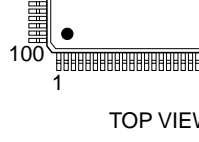


MB88141APF-ER  
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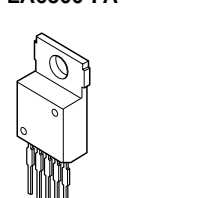


Small Outline L-leaded  
Package  
Pin 8—98

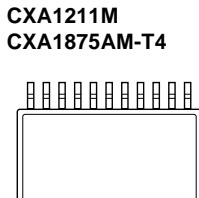
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LA6500-FA

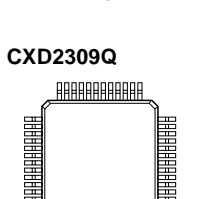


CXA1211M  
CXA1875AM-T4



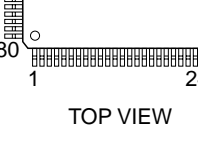
8pin

CXD2309Q

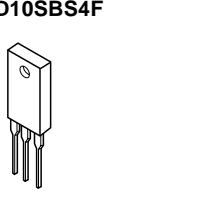


Quad Flat L-leaded  
Package  
Pin 20—996

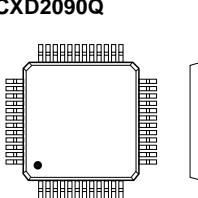
CXD2303AQ



D10SC4M  
D10SB34F

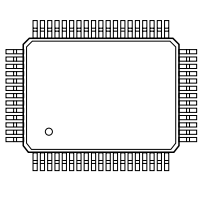


CXA3266Q-T6  
CXD2090Q



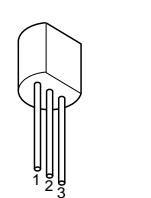
TOP VIEW

CXA2100AQ-TL

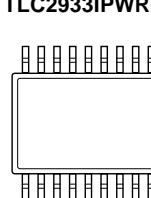


TOP VIEW

UPC1093J-1-T

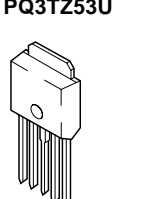


TLC2932IPW  
TLC2933IPWR

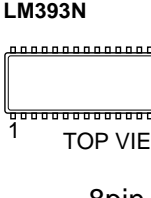


14pin

PQ3TZ53U

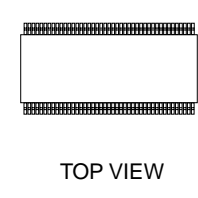


LM393N

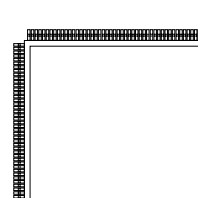


8pin

MB81F161622B-80

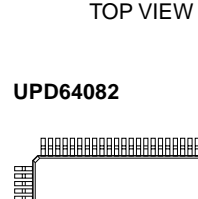


CXD9509Q



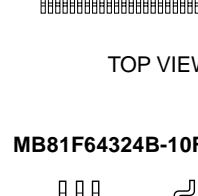
TOP VIEW

UPD64082



TOP VIEW

MB81F64324B-10FN

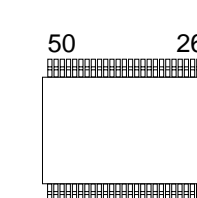


TOP VIEW

TC7SET04F(TE85R)

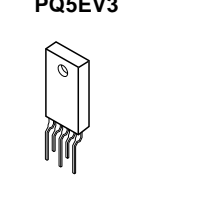


PQ1CG2032FZ

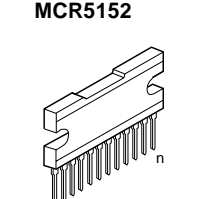


TOP VIEW

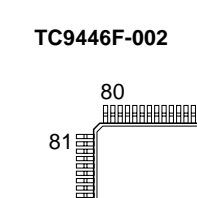
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MCR5152

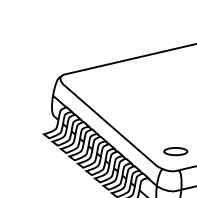


TC9446F-002

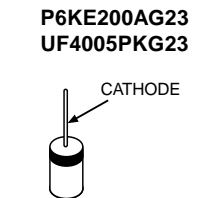


TOP VIEW

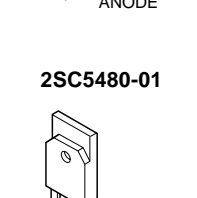
CXA2123AQ-T6



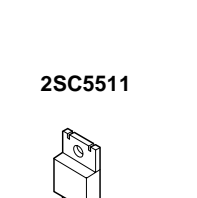
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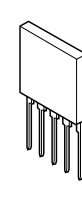
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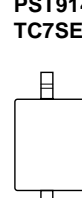
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DM-58

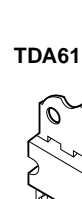


PST9120NL  
PST9145NL  
TC7SET08FU(TE85L)



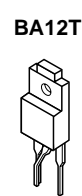
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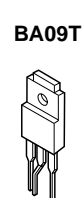


9

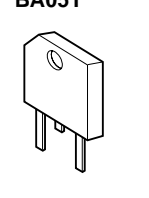
BA12T



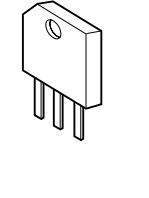
BA09T



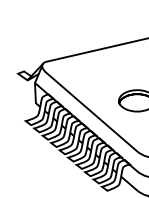
BA05FP-E2  
BA05T



BA09FP-E2



CXP750096-012Q





## SECTION 7

### EXPLODED VIEWS

**NOTE:**

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

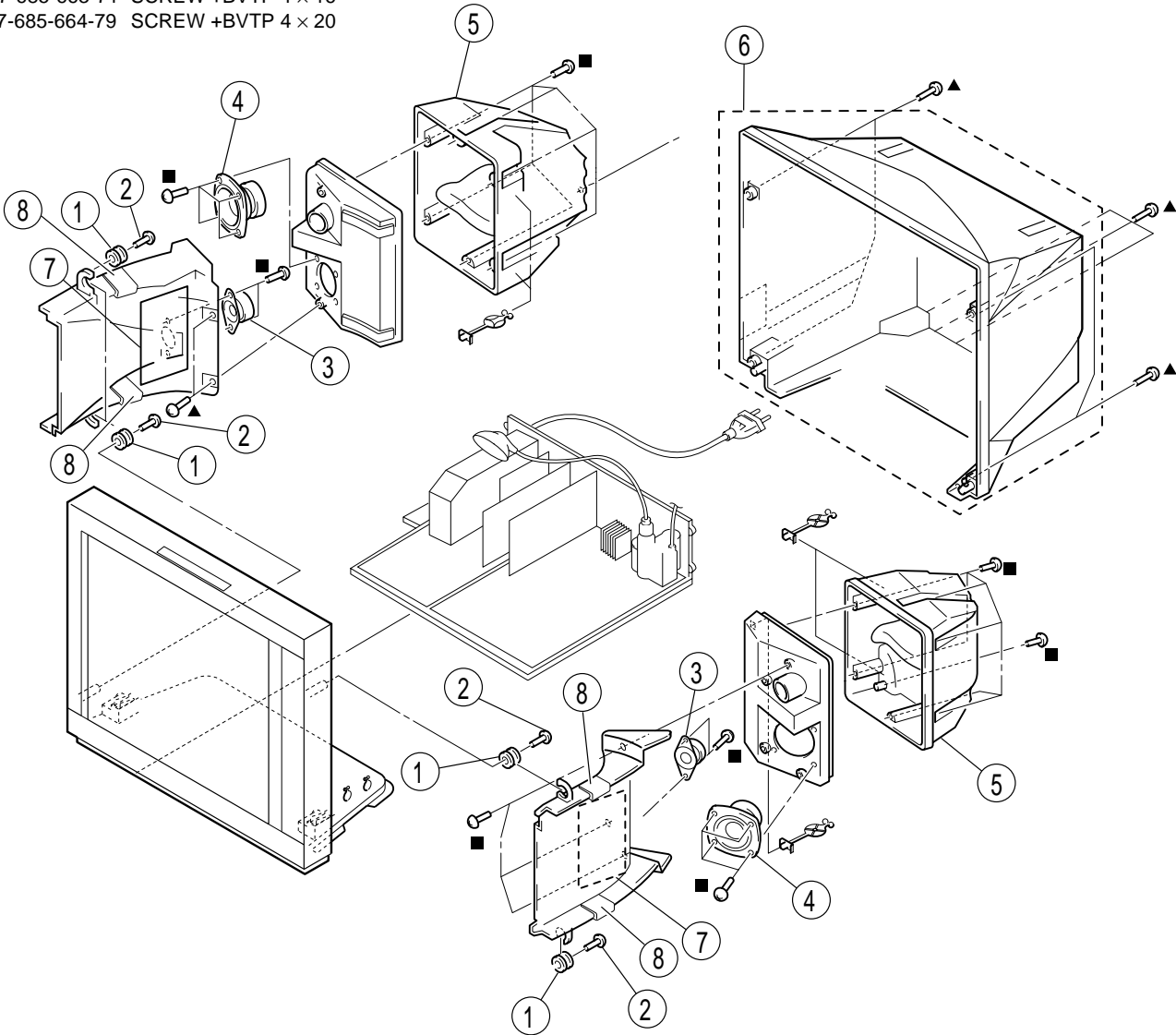
The components identified by shading and mark ▲ are critical for safety.  
Replace only with part number specified.

**CAUTION:** The aluminium frame must be connected to the ground with the ground cable from DH board. Failure to do so, may cause the user to suffer electric shock.

#### 7-1. SPEAKER BRACKET

■: 7-685-663-71 SCREW +BVTP 4 × 16

▲: 7-685-664-79 SCREW +BVTP 4 × 20

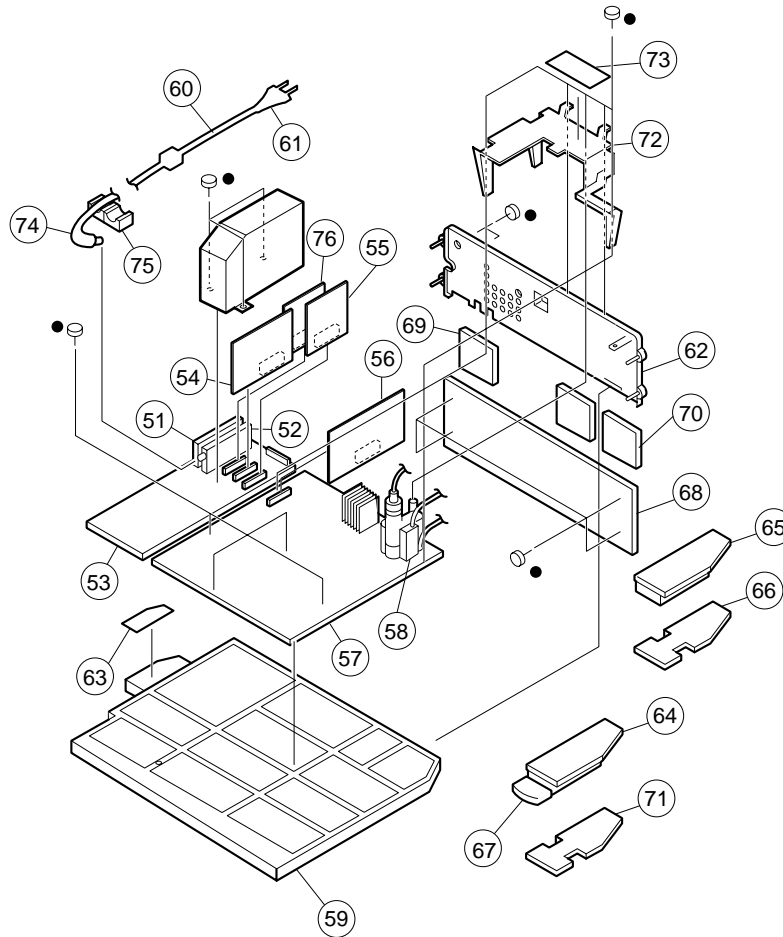


REF. NO.	PART NO.	DESCRIPTION
1	4-374-745-11	CUSHION (A)
2	4-064-929-02	SCREW, TP+TWH 4X25
3	1-529-562-11	SPEAKER (7X4CM)
4	1-505-473-11	SPEAKER (12CM)
5	* 4-071-339-01	DUCT, SPEAKER
6	X-4036-879-1	COVER ASSY, REAR
7	* 4-073-084-01	DUCT, CUSHION
8	* 4-074-512-01	CUSHION (S), DGC

REMARK

**7-2. CHASSIS**

●: 7-685-648-71 SCREW +BVTP 3 × 12



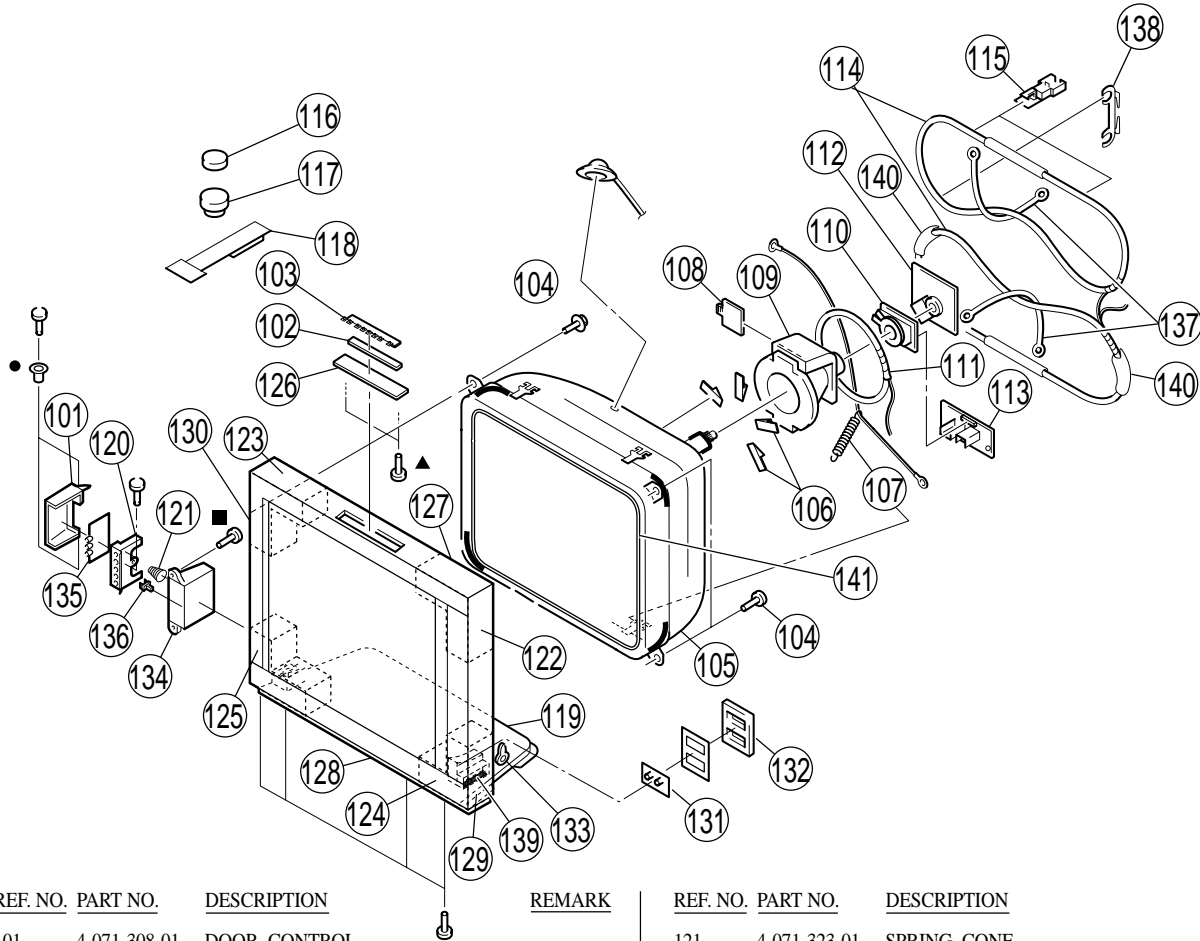
REF. NO.	PART NO.	DESCRIPTION	REMARK
51	8-598-452-20	TUNER, FSS BTF-WG442	
52	8-598-508-10	TUNER, FSS BTF-LG436	
53	* A-1299-159-A	A BOARD COMPLETE (KV-ES34M31)	
	* A-1299-157-A	A BOARD COMPLETE (KV-ES34M61)	
	* A-1299-161-A	A BOARD COMPLETE (KV-ES34M80)	
	* A-1299-109-A	A BOARD COMPLETE (KV-ES34M90)	
54	* A-1136-054-A	B3 BOARD COMPLETE	
55	* A-1343-778-B	E BOARD MOUNT	
56	* A-1343-777-A	D1 BOARD MOUNT	
57	* A-1346-902-A	D BOARD COMPLETE	
58	△ 1-453-326-11	TRANSFORMER ASSY, FLYBACK (NX-4601/J1J4)	
59	* 4-071-314-01	BRACKET, MAIN	
60	△ 4-022-115-01	HOLDER, AC CORD	
61	△ 1-792-035-11	CORD, POWER (WITH FILTER) (KV-ES34M31)	
	△ 1-791-439-11	CORD, POWER (WITH CONNECTOR) (KV-ES34M61/ES34M80)	
	△ 1-790-299-11	CORD, POWER (WITH NOISE FILTER) (KV-ES34M90)	
62	* 4-071-315-01	BRACKET, TERMINAL	

REF. NO.	PART NO.	DESCRIPTION	REMARK
63	* A-1241-402-A	F1 BOARD MOUNT	
64	* 4-071-307-01	HOLDER, F2 BOARD	
65	* 4-071-307-01	HOLDER, H1 BOARD	
66	* A-1372-728-A	H1 BOARD MOUNT	
67	4-071-305-01	BUTTON, POWER	
68	* A-1394-965-A	J BOARD COMPLETE	
69	* A-1299-092-A	A1 BOARD COMPLETE	
70	* A-1136-069-A	BC4 BOARD COMPLETE	
71	* A-1241-403-A	F2 BOARD MOUNT	
72	* 4-071-316-01	SUPPORTER, PWB	
73	* A-1343-791-A	DH BOARD MOUNTED (KV-ES34M31)	
	* A-1343-851-A	DH BOARD MOUNTED (KV-ES34M61)	
	* A*1343-850-A	DH BOARD MOUNTED (KV-ES34M80/ES34M90)	
74	1-790-082-11	CABLE RF	
75	1-543-827-31	CLAMP, SLEEVE FERRITE	
76	* A-1342-516-A	V BOARD MOUNT (KV-ES34M31/ES34M61 ONLY)	

### 7-3. PICTURE TUBE

- : 7-685-648-71 SCREW +BVTP 3 × 12  
 ■: 7-685-663-71 SCREW +BVTP 4 × 16  
 ▲: 7-685-661-14 SCREW +BVTP 4 × 12

**NOTE:** The Picture Tube for OCE model is up-side down, and the position for the anode cap and springs are changed accordingly.



REF. NO.	PART NO.	DESCRIPTION	REMARK
101	4-071-308-01	DOOR, CONTROL	
102	* A-1372-730-A	H3 BOARD MOUNT	
103	4-071-312-02	BUTTON, TOP SW	
104	4-046-765-12	SCREW TAPPING 7+CROWN WASHER	
105	▲ 8-735-065-05	PICTURE TUBE (A80LPD10X) (KV-ES34M31)	
	▲ 8-735-063-05	PICTURE TUBE (A80LPD10X) (KV-ES34M61)	
	▲ 8-735-062-05	PICTURE TUBE (A80LPD10X) (KV-ES34M80)	
	▲ 8-735-064-05	PICTURE TUBE (A80LPD10X) (KV-ES34M90)	
106	4-046-600-01	SPACER, DY	
107	4-065-852-21	SPRING, EXTENSION	
108	2-163-920-01	PLATE, TLH CORRECTION	
109	▲ 8-451-500-31	DEFLECTION YOKE (Y34RSC2-M3)	
110	8-453-007-31	NA324-M3	
111	1-452-896-11	COIL, NA ROTATION (RT200)	
112	* A-1332-005-A	C BOARD MOUNT	
113	* A-1342-515-A	VM BOARD MOUNT	
114	▲ 1-419-293-11	COIL, DEGAUSSING	
115	* 4-067-221-02	CLIP (29RSN), DGC	
116	1-452-032-11	MAGNET, DISC	
117	1-452-014-11	CIRCULAR DISC MAGNET B	
118	4-051-734-22	PIECE B(120), CONV. CORRECT	
119	* 4-071-334-01	COVER, FRONT	
120	* X-4037-280-1	HOLDER ASSY, CONTROL	

REF. NO.	PART NO.	DESCRIPTION	REMARK
121	4-071-323-01	SPRING, CONE	
122	* 4-071-335-01	BRACKET (TR), CRT	
123	* 4-071-336-01	BRACKET (TL), CRT	
124	* 4-071-337-01	BRACKET (BR), CRT	
125	* 4-071-338-01	BRACKET (BL), CRT	
126	* 4-071-311-01	HOLDER, H3	
127	X-4037-420-1	FRAME SUB-ASSY, TOP (KV-ES34M31/M61/M80)	
	X-4037-542-1	FRAME SUB-ASSY, TOP (KV-ES34M90)	
128	X-4037-421-1	FRAME SUB-ASSY, BOTTOM	
129	X-4037-422-1	FRAME SUB-ASSY, RIGHT	
130	X-4037-423-1	FRAME SUB-ASSY, LEFT	
131	* 4-071-306-01	LIGHT, GUIDE	
132	* 4-072-950-01	BRACKET, LIGHT GUIDE	
133	* 4-073-080-01	FASTEN	
134	* 4-071-310-01	BRACKET, SIDE	
135	* A-1372-729-A	H2 BOARD MOUNT	
136	4-047-464-01	CATCHER, PUSH	
137	4-067-455-01	BAND, DGC	
138	4-054-297-02	HOLDER, DGC	
139	* 4-071-673-01	SHEET, COVER	
140	* 4-074-513-01	CUSHION (L), DGC	
141	▲ 1-419-295-11	COIL, LANDING CORRECTION (Except KV-ES34M31)	

## ELECTRICAL PARTS LIST

A

## NOTE:

The components identified by shading and mark △ are critical for safety.  
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

• Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

• All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

• All resistors are in ohms  
• F : nonflammable

## CAPACITORS

• MF :  $\mu$ F, PF :  $\mu$ F

## COILS

• MMH : mH, UH :  $\mu$ H

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
* A-1299-157-A	A BOARD COMPLETE (KV-ES34M61)			C1203	1-164-505-11	CERAMIC CHIP 2.2MF	16V
* A-1299-159-A	A BOARD COMPLETE (KV-ES34M31)			C1204	1-164-690-91	CERAMIC CHIP 0.0022MF	5% 50V
* A-1299-161-A	A BOARD COMPLETE (KV-ES34M80)			C1205	1-164-690-91	CERAMIC CHIP 0.0022MF	5% 50V
* A-1299-109-A	A BOARD COMPLETE (KV-ES34M90)						
	*****			C1206	1-126-965-11	ELECT 22MF	20% 50V
* 1-555-110-00	CABLE, PIN			C1207	1-107-725-11	CERAMIC CHIP 0.1MF	10% 16V
4-382-854-11	SCREW (M3X10), P, SW (+)			C1208	1-126-023-11	ELECT 100MF	20% 16V
				C1209	1-164-505-11	CERAMIC CHIP 2.2MF	16V
				C1210	1-125-838-91	CERAMIC CHIP 2.2MF	10% 6.3V
		<CAPACITOR>		C1211	1-163-989-11	CERAMIC CHIP 0.033MF	10% 25V
C004	1-163-001-11	CERAMIC CHIP 220PF	10% 50V	C1212	1-125-838-91	CERAMIC CHIP 2.2MF	10% 6.3V
C005	1-163-001-11	CERAMIC CHIP 220PF	10% 50V	C1213	1-163-989-11	CERAMIC CHIP 0.033MF	10% 25V
C006	1-107-725-11	CERAMIC CHIP 0.1MF	10% 16V	C1214	1-126-055-11	ELECT 470MF	20% 50V
C007	1-126-933-11	ELECT 100MF	20% 16V	C1215	1-126-055-11	ELECT 470MF	20% 50V
C009	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V				
				C1216	1-126-943-11	ELECT 2200MF	20% 25V
C010	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C1217	1-126-943-11	ELECT 2200MF	20% 25V
C012	1-163-227-11	CERAMIC CHIP 10PF	0.5PF 50V	C1219	1-126-961-11	ELECT 2.2MF	20% 50V
C013	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	C1220	1-126-961-11	ELECT 2.2MF	20% 50V
C014	1-126-967-11	ELECT 47MF	20% 50V	C1221	1-126-933-11	ELECT 100MF	20% 16V
C015	1-163-227-11	CERAMIC CHIP 10PF	0.5PF 50V				
				C1222	1-125-838-91	CERAMIC CHIP 2.2MF	10% 6.3V
C016	1-102-852-91	CERAMIC CHIP 47PF	5% 50V	C1223	1-125-838-91	CERAMIC CHIP 2.2MF	10% 6.3V
C017	1-102-525-11	CERAMIC CHIP 68PF	5% 50V	C1224	1-125-838-91	CERAMIC CHIP 2.2MF	10% 6.3V
C018	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	C1225	1-125-838-91	CERAMIC CHIP 2.2MF	10% 6.3V
C019	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	C1241	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V
C020	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V				
				C1242	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V
C021	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	C1243	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V
C024	1-163-227-11	CERAMIC CHIP 10PF	0.5PF 50V	C1244	1-110-617-51	ELECT 2200MF	20% 50V
C028	1-163-037-11	CERAMIC CHIP 0.022MF	10% 50V	C1245	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V
C030	1-126-960-11	ELECT 1MF	20% 50V	C1246	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V
C031	1-107-725-11	CERAMIC CHIP 0.1MF	10% 16V				
				C1247	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V
C032	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	C1248	1-110-617-51	ELECT 2200MF	20% 50V
C033	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V	C1249	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C034	1-163-259-91	CERAMIC CHIP 220PF	5% 50V	C1251	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C103	1-107-725-11	CERAMIC CHIP 0.1MF	10% 16V	C1252	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C104	1-126-933-11	ELECT 100MF	20% 16V				
				C1253	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V
C107	1-163-005-11	CERAMIC CHIP 470PF	10% 50V	C1255	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C108	1-126-933-11	ELECT 100MF	20% 16V	C1256	1-137-194-81	MYLAR 0.47MF	5% 50V
C109	1-163-005-11	CERAMIC CHIP 470PF	10% 50V	C1258	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V
C110	1-163-005-11	CERAMIC CHIP 470PF	10% 50V	C1259	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V
C111	1-163-005-11	CERAMIC CHIP 470PF	10% 50V				
				C1260	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V
C112	1-126-933-11	ELECT 100MF	20% 16V	C1262	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C113	1-126-967-11	ELECT 47MF	20% 50V	C1263	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C114	1-126-967-11	ELECT 47MF	20% 50V	C1264	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C301	1-126-767-11	ELECT 1000MF	20% 16V	C1265	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V
C326	1-126-964-11	ELECT 10MF	20% 50V				
				C1267	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C1201	1-107-725-11	CERAMIC CHIP 0.1MF	10% 16V	C1268	1-137-194-81	MYLAR 0.47MF	5% 50V
C1202	1-107-725-11	CERAMIC CHIP 0.1MF	10% 16V	C1270	1-163-007-11	CERAMIC CHIP 680PF	10% 50V

A

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C1271	1-163-007-11	CERAMIC CHIP	680PF 10% 50V			<CONNECTOR>	
C1272	1-126-941-11	ELECT	470MF 20% 25V				
C1273	1-115-339-11	CERAMIC CHIP	0.1MF 10% 50V	CN110 *	1-560-218-00	PIN, CONNECTOR 7P	
C1274	1-115-339-11	CERAMIC CHIP	0.1MF 10% 50V	CN1108	1-695-299-11	CONNECTOR, BOARD TO BOARD 50P	
C1275	1-163-007-11	CERAMIC CHIP	680PF 10% 50V	CN1116	1-695-915-11	TAB (CONTACT)	
C1276	1-163-007-11	CERAMIC CHIP	680PF 10% 50V	CN1118	1-793-493-11	CONNECTOR, BOARD TO BOARD 20P (KV-ES34M31/ES34M61 only)	
C1277	1-164-690-91	CERAMIC CHIP	0.0022MF 5% 50V	CN1138*	1-564-507-11	PLUG, CONNECTOR 4P	
C1279	1-164-690-91	CERAMIC CHIP	0.0022MF 5% 50V	CN1140	1-793-494-11	CONNECTOR, BOARD TO BOARD 40P	
C1281	1-115-339-11	CERAMIC CHIP	0.1MF 10% 50V	CN1160*	1-564-513-11	PLUG, CONNECTOR 10P	
C1282	1-115-339-11	CERAMIC CHIP	0.1MF 10% 50V	CN1162	1-900-903-64	CONNECTOR ASSY 20P	
C1283	1-164-690-91	CERAMIC CHIP	0.0022MF 5% 50V	CN1180	1-793-495-11	CONNECTOR, BOARD TO BOARD 50P	
C1284	1-164-690-91	CERAMIC CHIP	0.0022MF 5% 50V	CN1190 *	1-564-510-11	PLUG, CONNECTOR 7P	
C1285	1-126-933-11	ELECT	100MF 20% 16V	CN1193 *	1-564-513-11	PLUG, CONNECTOR 10P	
C1286	1-126-933-11	ELECT	100MF 20% 16V	CN1195*	1-564-506-11	PLUG, CONNECTOR 3P	
C1287	1-163-251-11	CERAMIC CHIP	100PF 5% 50V	CN1196*	1-508-797-00	PIN, CONNECTOR 4P	
C1288	1-163-251-11	CERAMIC CHIP	100PF 5% 50V			<COMPOSITION CIRCUIT BLOCK>	
C1289	1-163-251-11	CERAMIC CHIP	100PF 5% 50V	CP1300	1-251-658-31	SPLITTER RF	
C1290	1-163-251-11	CERAMIC CHIP	100PF 5% 50V			<DIODE>	
C1291	1-163-251-11	CERAMIC CHIP	100PF 5% 50V	D001	8-719-073-01	DIODE MA111-(K8).S0	
C1292	1-163-251-11	CERAMIC CHIP	100PF 5% 50V	D002	8-719-073-01	DIODE MA111-(K8).S0	
C1297	1-136-177-00	MYLAR	1MF 5% 50V	D003	8-719-073-01	DIODE MA111-(K8).S0	
C1298	1-136-177-00	MYLAR	1MF 5% 50V	D004	8-719-073-01	DIODE MA111-(K8).S0	
C1301	1-126-933-11	ELECT	100MF 20% 16V	D005	8-719-073-01	DIODE MA111-(K8).S0	
C1302	1-115-339-11	CERAMIC CHIP	0.1MF 10% 50V	D006	8-719-073-01	DIODE MA111-(K8).S0	
C2200	1-126-964-11	ELECT	10MF 20% 50V	D007	8-719-158-18	DIODE RD5.6SB3	
C2201	1-126-964-11	ELECT	10MF 20% 50V	D013	8-719-158-18	DIODE RD5.6SB3	
C2202	1-126-964-11	ELECT	10MF 20% 50V	D014	8-719-073-01	DIODE MA111-(K8).S0	
C2203	1-126-963-11	ELECT	4.7MF 20% 50V	D100	8-719-073-01	DIODE MA111-(K8).S0	
C2204	1-125-838-91	CERAMIC CHIP	2.2MF 10% 6.3V	D300	8-719-073-01	DIODE MA111-(K8).S0	
C2205	1-125-838-91	CERAMIC CHIP	2.2MF 10% 6.3V	D301	8-719-073-01	DIODE MA111-(K8).S0	
C2206	1-126-964-11	ELECT	10MF 20% 50V	D302	8-719-073-01	DIODE MA111-(K8).S0	
C2207	1-216-065-91	RES,CHIP	4.7K 5% 1/10W	D317	8-719-073-01	DIODE MA111-(K8).S0	
C2208	1-216-065-91	RES,CHIP	4.7K 5% 1/10W	D1205	8-719-158-35	DIODE RD9.1SB	
C2209	1-126-968-11	ELECT	100MF 20% 50V	D1208	8-719-073-01	DIODE MA111-(K8).S0	
C2600	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V	D1209	8-719-073-01	DIODE MA111-(K8).S0	
C2601	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V	D2200	8-719-158-35	DIODE RD9.1SB	
C2602	1-126-933-11	ELECT	100MF 20% 16V	D2201	8-719-158-35	DIODE RD9.1SB	
C2603	1-126-933-11	ELECT	100MF 20% 16V	D2600	8-719-500-70	DIODE D5S4M	
C2605	1-126-925-11	ELECT	470MF 20% 10V			<FERRITE BEAD>	
C2606	1-164-344-11	CERAMIC CHIP	0.068MF 10% 25V	FB001	1-414-233-22	INDUCTOR CHIP 0UH	
C2608	1-126-916-11	ELECT	1000MF 20% 6.3V	FB002	1-414-233-22	INDUCTOR CHIP 0UH	
C2609	1-126-935-11	ELECT	470MF 20% 6.3V	FB003	1-414-233-22	INDUCTOR CHIP 0UH	
C2610	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V	FB004	1-414-233-22	INDUCTOR CHIP 0UH	
C2611	1-126-934-11	ELECT	220MF 20% 16V	FB005	1-414-233-22	INDUCTOR CHIP 0UH	
C2612	1-104-665-11	ELECT	100MF 20% 25V	FB006	1-414-233-22	INDUCTOR CHIP 0UH	
C2613	1-104-665-11	ELECT	100MF 20% 25V	FB007	1-414-233-22	INDUCTOR CHIP 0UH	
C2614	1-126-925-11	ELECT	470MF 20% 10V	FB008	1-414-233-22	INDUCTOR CHIP 0UH	
C3330	1-107-725-11	CERAMIC CHIP	0.1MF 10% 16V	FB1205	1-410-397-21	FERRITE 1.1UH	
C3331	1-126-933-11	ELECT	100MF 20% 16V	FB1206	1-410-397-21	FERRITE 1.1UH	
C3336	1-126-933-11	ELECT	100MF 20% 16V	FB1207	1-410-397-21	FERRITE 1.1UH	
C3338	1-163-005-11	CERAMIC CHIP	470PF 10% 50V	FB1208	1-410-397-21	FERRITE 1.1UH	
C3350	1-163-005-11	CERAMIC CHIP	470PF 10% 50V	FB1300	1-216-295-91	SHORT 0	
C3351	1-163-005-11	CERAMIC CHIP	470PF 10% 50V				
C3352	1-163-005-11	CERAMIC CHIP	470PF 10% 50V				
C3353	1-126-933-11	ELECT	100MF 20% 16V				
C3354	1-126-967-11	ELECT	47MF 20% 50V				
C3355	1-126-967-11	ELECT	47MF 20% 50V				

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REF. NO.	PART NO.	DESCRIPTION	REMARK
		<FILTER>	
FL001	1-236-071-11	ENCAPSULATED COMPONENT	
		<IC>	
IC001	8-752-910-26	IC CXP750096-012Q	
IC002	8-759-042-02	IC S-80743AL-A7-S	
IC003	8-759-527-76	IC M24C08-MN6T	
IC004	8-759-527-75	IC M24C04-MN6T	
IC100	8-759-042-02	IC S-80743AL-A7-S	
IC1201	8-759-273-12	IC TDA7315D013TR	
IC1203	8-759-553-45	IC TDA7481	
IC1204	8-759-553-45	IC TDA7481	
IC1205	8-759-100-96	IC UPC4558G2	
IC1205	8-759-100-96	IC UPC4558G2	
IC2200	8-759-745-64	IC NJM4560M	
IC2600	8-759-394-36	IC BA09T	
IC2601	8-759-450-47	IC BA05T	
IC2603	8-759-640-19	IC PQ1CG2032FZ	
IC2604	8-759-644-37	IC PQ5EV3	
		<CHIP CONDUCTOR>	
JR001	1-216-295-91	SHORT	0
JR002	1-216-295-91	SHORT	0
JR102	1-216-295-91	SHORT	0
JR107	1-216-295-91	SHORT	0
JR109	1-216-295-91	SHORT	0 (KV-ES34M80 only)
JR1301	1-216-295-91	SHORT	0
JR2601	1-216-295-91	SHORT	0
		<COIL>	
L001	1-414-856-11	INDUCTOR	10UH
L002	1-414-856-11	INDUCTOR	10UH
L003	1-414-751-11	INDUCTOR	1UH
L005	1-414-856-11	INDUCTOR	10UH
L101	1-414-856-11	INDUCTOR	10UH
L102	1-414-856-11	INDUCTOR	10UH
L103	1-414-856-11	INDUCTOR	10UH
L104	1-414-856-11	INDUCTOR	10UH
L105	1-414-856-11	INDUCTOR	10UH
L1201	1-414-187-11	INDUCTOR	47UH
L1202	1-416-857-11	INDUCTOR	65UH
L1203	1-416-857-11	INDUCTOR	65UH
L1204	1-416-966-11	INDUCTOR	0UH
L1205	1-416-966-11	INDUCTOR	0UH
L1300	1-414-856-11	INDUCTOR	10UH
L2600	1-419-249-11	INDUCTOR	15UH
L2601	1-419-249-11	INDUCTOR	15UH
L2602	1-412-525-31	INDUCTOR	10UH
L2603	1-412-525-31	INDUCTOR	10UH
L3302	1-414-856-11	INDUCTOR	10UH
L3303	1-414-856-11	INDUCTOR	10UH
L3304	1-414-856-11	INDUCTOR	10UH
L3305	1-414-856-11	INDUCTOR	10UH
L3306	1-414-856-11	INDUCTOR	10UH

REF. NO.	PART NO.	DESCRIPTION	REMARK
		<IC LINK>	
PS1201	1-532-686-21	LINK, IC 2.7A/150V	
PS1202	1-532-686-21	LINK, IC 2.7A/150V	
PS1203	1-532-686-21	LINK, IC 2.7A/150V	
PS1204	1-532-686-21	LINK, IC 2.7A/150V	
		<TRANSISTOR>	
Q001	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q002	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q003	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q004	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q005	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q006	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q007	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q101	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q301	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q313	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1205	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q1206	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1207	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1209	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1210	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1211	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q2200	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q2201	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q3300	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
		<RESISTOR>	
R001	1-216-033-00	RES,CHIP	220 5% 1/10W
R002	1-216-033-00	RES,CHIP	220 5% 1/10W
R003	1-216-049-91	RES,CHIP	1k 5% 1/10W
R004	1-216-025-91	RES,CHIP	100 5% 1/10W
R005	1-216-025-91	RES,CHIP	100 5% 1/10W
R006	1-216-033-00	RES,CHIP	2.2K 5% 1/10W
R008	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R010	1-216-057-91	RES,CHIP	4.7K 5% 1/10W
R011	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R012	1-216-057-91	RES,CHIP	2.2K 5% 1/10W
R013	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R014	1-216-025-91	RES,CHIP	100 5% 1/10W
R015	1-216-025-91	RES,CHIP	100 5% 1/10W
R016	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R017	1-216-049-91	RES,CHIP	1K 5% 1/10W
R018	1-216-045-00	RES,CHIP	680 5% 1/10W
R019	1-216-049-91	RES,CHIP	1K 5% 1/10W
R020	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R021	1-216-295-91	SHORT	0
R022	1-216-033-00	RES,CHIP	220 5% 1/10W
R023	1-216-025-91	RES,CHIP	100 5% 1/10W
R024	1-216-063-91	RES,CHIP	3.9K 5% 1/10W
R025	1-216-033-00	RES,CHIP	220 5% 1/10W
R026	1-216-033-00	RES,CHIP	220 5% 1/10W
R027	1-216-049-91	RES,CHIP	1K 5% 1/10W

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R028	1-216-049-91	RES,CHIP	1K 5% 1/10W	R089	1-216-049-91	RES,CHIP	1K 5% 1/10W
R029	1-216-049-91	RES,CHIP	1K 5% 1/10W	R090	1-216-025-91	RES,CHIP	100 5% 1/10W
R031	1-216-033-00	RES,CHIP	220 5% 1/10W	R091	1-216-025-91	RES,CHIP	100 5% 1/10W
R032	1-216-049-91	RES,CHIP	1K 5% 1/10W	R092	1-216-033-00	RES,CHIP	220 5% 1/10W
R033	1-216-033-00	RES,CHIP	220 5% 1/10W	R093	1-216-073-00	RES,CHIP	10K 5% 1/10W
R035	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R094	1-216-073-00	RES,CHIP	10K 5% 1/10W
R036	1-216-033-00	RES,CHIP	220 5% 1/10W	R095	1-216-049-91	RES,CHIP	1K 5% 1/10W
R037	1-216-033-00	RES,CHIP	220 5% 1/10W	R096	1-216-049-91	RES,CHIP	1K 5% 1/10W
R038	1-216-045-00	RES,CHIP	680 5% 1/10W	R097	1-216-025-91	RES,CHIP	100 5% 1/10W
R039	1-216-025-91	RES,CHIP	100 5% 1/10W	R098	1-216-025-91	RES,CHIP	100 5% 1/10W
R040	1-216-033-00	RES,CHIP	220 5% 1/10W	R099	1-216-025-91	RES,CHIP	100 5% 1/10W
R041	1-216-025-91	RES,CHIP	100 5% 1/10W	R101	1-216-025-91	RES,CHIP	100 5% 1/10W
R042	1-216-295-91	SHORT	0	R102	1-216-025-91	RES,CHIP	100 5% 1/10W
R043	1-216-025-91	RES,CHIP	100 5% 1/10W	R105	1-216-295-91	SHORT	0
R044	1-216-065-91	RES,CHIP	4.7K 5% 1/10W	R109	1-216-041-00	RES,CHIP	470 5% 1/10W
R045	1-216-065-91	RES,CHIP	4.7K 5% 1/10W	R110	1-216-043-91	RES,CHIP	560 5% 1/10W
R046	1-216-033-00	RES,CHIP	220 5% 1/10W	R111	1-216-025-91	RES,CHIP	100 5% 1/10W
R047	1-216-033-00	RES,CHIP	220 5% 1/10W	R112	1-216-025-91	RES,CHIP	100 5% 1/10W
R048	1-216-073-00	RES,CHIP	10K 5% 1/10W	R116	1-216-025-91	RES,CHIP	100 5% 1/10W
R051	1-216-049-91	RES,CHIP	1K 5% 1/10W	R117	1-216-025-91	RES,CHIP	100 5% 1/10W
R052	1-216-049-91	RES,CHIP	1K 5% 1/10W	R118	1-216-025-91	RES,CHIP	100 5% 1/10W
R053	1-216-049-91	RES,CHIP	1K 5% 1/10W	R301	1-216-113-00	RES,CHIP	470K 5% 1/10W
R054	1-216-033-00	RES,CHIP	220 5% 1/10W	R302	1-216-089-91	RES,CHIP	47K 5% 1/10W
R055	1-216-295-91	SHORT	0	R303	1-216-089-91	RES,CHIP	47K 5% 1/10W
R056	1-216-295-91	SHORT	0	R1201	1-216-033-00	RES,CHIP	220 5% 1/10W
R057	1-216-295-91	SHORT	0	R1202	1-216-033-00	RES,CHIP	220 5% 1/10W
R058	1-216-295-91	SHORT	0	R1203	1-216-079-00	RES,CHIP	18K 5% 1/10W
R059	1-216-033-00	RES,CHIP	220 5% 1/10W	R1204	1-216-079-00	RES,CHIP	18K 5% 1/10W
R060	1-216-033-00	RES,CHIP	220 5% 1/10W	R1205	1-216-089-91	RES,CHIP	47K 5% 1/10W
R061	1-216-025-91	RES,CHIP	100 5% 1/10W	R1206	1-216-089-91	RES,CHIP	47K 5% 1/10W
R062	1-216-049-91	RES,CHIP	1K 5% 1/10W	R1236	1-208-808-11	METAL CHIP	12K 0.50% 1/10W
R063	1-216-025-91	RES,CHIP	100 5% 1/10W	R1237	1-216-085-00	RES,CHIP	33K 5% 1/10W
R064	1-216-025-91	RES,CHIP	100 5% 1/10W	R1238	1-216-081-00	RES,CHIP	22K 5% 1/10W
R065	1-216-045-00	RES,CHIP	680 5% 1/10W	R1239	1-216-067-00	RES,CHIP	5.6K 5% 1/10W
R066	1-216-049-91	RES,CHIP	1K 5% 1/10W	R1240	1-216-085-00	RES,CHIP	33K 5% 1/10W
R067	1-216-073-00	RES,CHIP	10K 5% 1/10W	R1241	1-216-073-00	RES,CHIP	10K 5% 1/10W
R068	1-216-073-00	RES,CHIP	10K 5% 1/10W	R1242	1-216-073-00	RES,CHIP	10K 5% 1/10W
R069	1-216-065-91	RES,CHIP	4.7K 5% 1/10W	R1244	1-216-073-00	RES,CHIP	10K 5% 1/10W
R070	1-216-033-00	RES,CHIP	220 5% 1/10W	R1246	1-208-808-11	METAL CHIP	12K 0.50% 1/10W
R071	1-216-025-91	RES,CHIP	100 5% 1/10W	R1247	1-216-085-00	RES,CHIP	33K 5% 1/10W
R072	1-216-025-91	RES,CHIP	100 5% 1/10W	R1248	1-216-075-00	RES,CHIP	12K 5% 1/10W
R073	1-216-055-00	RES,CHIP	1.8K 5% 1/10W	R1249	1-216-025-91	RES,CHIP	100 5% 1/10W
R074	1-216-055-00	RES,CHIP	1.8K 5% 1/10W	R1250	1-216-063-91	RES,CHIP	3.9K 5% 1/10W
R075	1-216-055-00	RES,CHIP	1.8K 5% 1/10W	R1252	1-216-073-00	RES,CHIP	10K 5% 1/10W
R076	1-216-025-91	RES,CHIP	100 5% 1/10W	R1253	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R077	1-216-025-91	RES,CHIP	100 5% 1/10W	R1254	1-216-075-00	RES,CHIP	12K 5% 1/10W
R078	1-216-025-91	RES,CHIP	100 5% 1/10W	R1255	1-216-075-00	RES,CHIP	12K 5% 1/10W
R079	1-216-025-91	RES,CHIP	100 5% 1/10W	R1256	1-216-073-00	RES,CHIP	10K 5% 1/10W
R080	1-216-063-91	RES,CHIP	3.9K 5% 1/10W	R1257	1-216-025-91	RES,CHIP	100 5% 1/10W
R081	1-216-025-91	RES,CHIP	100 5% 1/10W	R1258	1-216-075-00	RES,CHIP	12K 5% 1/10W
R082	1-216-041-00	RES,CHIP	470 5% 1/10W	R1259	1-216-073-00	RES,CHIP	10K 5% 1/10W
R083	1-216-049-91	RES,CHIP	1K 5% 1/10W	R1260	1-216-029-00	RES,CHIP	150 5% 1/10W
R084	1-216-049-91	RES,CHIP	1K 5% 1/10W	R1261	1-216-029-00	RES,CHIP	150 5% 1/10W
R085	1-208-798-11	METAL CHIP	4.7K 0.50% 1/10W	R1264	1-216-041-00	RES,CHIP	470 5% 1/10W
R086	1-216-073-00	RES,CHIP	10K 5% 1/10W	R1265	1-216-041-00	RES,CHIP	470 5% 1/10W
R087	1-216-033-00	RES,CHIP	220 5% 1/10W	R1266	1-216-049-91	RES,CHIP	1K 5% 1/10W
R088	1-216-049-91	RES,CHIP	1K 5% 1/10W				



REF. NO.	PART NO.	DESCRIPTION	REMARK
R1267	1-216-077-91	RES,CHIP	15K 5% 1/10W
R1269	1-216-025-91	RES,CHIP	100 5% 1/10W
R1270	1-216-089-91	RES,CHIP	47K 5% 1/10W
R1271	1-216-049-91	RES,CHIP	1K 5% 1/10W
R1272	1-216-049-91	RES,CHIP	1K 5% 1/10W
R1273	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R1275	1-216-081-00	RES,CHIP	22K 5% 1/10W
R1276	1-216-081-00	RES,CHIP	22K 5% 1/10W
R1277	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R1278	1-125-838-91	CERAMIC CHIP	2.2MF 10% 6.3V
R1279	1-125-838-91	CERAMIC CHIP	2.2MF 10% 6.3V
R1280	1-216-029-00	RES,CHIP	150 5% 1/10W
R1281	1-216-029-00	RES,CHIP	150 5% 1/10W
R1283	1-216-295-91	SHORT	0
R1284	1-216-295-91	SHORT	0
R1286	1-216-073-00	RES,CHIP	10K 5% 1/10W
R2200	1-216-021-00	RES,CHIP	68 5% 1/10W
R2201	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R2202	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R2203	1-216-021-00	RES,CHIP	68 5% 1/10W
R2204	1-216-073-00	RES,CHIP	10K 5% 1/10W
R2205	1-216-097-91	RES,CHIP	100K 5% 1/10W
R2206	1-216-117-00	RES,CHIP	680K 5% 1/10W
R2207	1-216-063-91	RES,CHIP	3.9K 5% 1/10W
R2208	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R2209	1-216-117-00	RES,CHIP	680K 5% 1/10W
R2210	1-216-089-91	RES,CHIP	47K 5% 1/10W
R2211	1-216-097-91	RES,CHIP	100K 5% 1/10W
R2212	1-216-073-00	RES,CHIP	10K 5% 1/10W
R2213	1-216-089-91	RES,CHIP	47K 5% 1/10W
R2214	1-216-089-91	RES,CHIP	47K 5% 1/10W
R2215	1-216-089-91	RES,CHIP	47K 5% 1/10W
R2600	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R2601	1-216-655-11	METAL CHIP	1.5K 0.50% 1/10W
R2602	1-208-781-11	METAL CHIP	910 0.50% 1/10W
R2603	1-208-790-11	METAL CHIP	2.2K 0.50% 1/10W
R2604	1-208-790-11	METAL CHIP	2.2K 0.50% 1/10W
R3300	1-216-043-91	RES,CHIP	560 5% 1/10W
R3320	1-216-073-00	RES,CHIP	10K 5% 1/10W
R3323	1-216-025-91	RES,CHIP	100 5% 1/10W
R3334	1-216-025-91	RES,CHIP	100 5% 1/10W
R3362	1-216-025-91	RES,CHIP	100 5% 1/10W
R3374	1-216-295-91	SHORT	0
		<VARIABLE RESISTOR>	
RV3300	1-238-597-11	RES, ADJ, CARBON 1K	
		<TUNER>	
TU101	8-598-452-20	TUNER, FSS BTF-WG442 (KV-ES34M31/M61)	
TU101	8-598-450-10	TUNER, FSS BTF-LG434 (KV-ES34M80)	
TU101	8-598-452-30	TUNER, FSS BTF-LG442 (KV-ES34M90)	
TU3301	8-598-508-10	TUNER, FSS BTF-LG436	

REF. NO.	PART NO.	DESCRIPTION	REMARK
		<CRYSTAL>	
X001	1-567-928-11	VIBLATOR, CERAMIC	
*****			
	* A-1299-092-A	A1 BOARD COMPLETE	*****
		<CAPACITOR>	
C8103	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C8104	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C8105	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C8106	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C8107	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C8108	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V
C8109	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C8110	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C8111	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C8112	1-163-001-11	CERAMIC CHIP	220PF 10% 50V
C8116	1-164-161-11	CERAMIC CHIP	0.0022MF 10% 50V
C8117	1-126-382-11	ELECT	100MF 20% 16V
C8118	1-127-532-11	ELECT	47MF 20% 6.3V
C8119	1-126-795-11	ELECT	10MF 20% 25V
C8120	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V
C8121	1-125-838-91	CERAMIC CHIP	2.2MF 10% 6.3V
C8122	1-125-838-91	CERAMIC CHIP	2.2MF 10% 6.3V
C8123	1-127-532-11	ELECT	47MF 20% 6.3V
C8124	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C8125	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C8126	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C8127	1-163-235-11	CERAMIC CHIP	22PF 5% 50V
C8128	1-163-235-11	CERAMIC CHIP	22PF 5% 50V
C8129	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C8130	1-126-382-11	ELECT	100MF 20% 16V
C8131	1-126-382-11	ELECT	100MF 20% 16V
C8132	1-125-838-91	CERAMIC CHIP	2.2MF 10% 6.3V
C8133	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C8134	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V
C8135	1-126-382-11	ELECT	100MF 20% 16V
C8136	1-163-251-11	CERAMIC CHIP	100PF 5% 50V
C8137	1-163-251-11	CERAMIC CHIP	100PF 5% 50V
C8138	1-163-251-11	CERAMIC CHIP	100PF 5% 50V
C8139	1-163-251-11	CERAMIC CHIP	100PF 5% 50V
C8140	1-163-251-11	CERAMIC CHIP	100PF 5% 50V
C8141	1-163-251-11	CERAMIC CHIP	100PF 5% 50V
C8142	1-163-235-11	CERAMIC CHIP	22PF 5% 50V
C8143	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C8144	1-163-251-11	CERAMIC CHIP	100PF 5% 50V
C8145	1-163-233-11	CERAMIC CHIP	18PF 5% 50V
C8146	1-107-823-11	CERAMIC CHIP	0.47MF 10% 16V
C8147	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V
C8150	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V
C8155	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V
C8161	1-126-382-11	ELECT	100MF 20% 16V



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REF. NO.	PART NO.	DESCRIPTION				REMARK	REF. NO.	PART NO.	DESCRIPTION				REMARK
C8162	1-164-505-11	CERAMIC CHIP	2.2MF		16V				<FILTER>				
C8163	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V								
C8166	1-163-251-11	CERAMIC CHIP	100PF	5%	50V		FL8100	1-234-177-21	FILTER, CHIP EMI				
C8167	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V		FL8101	1-234-177-21	FILTER, CHIP EMI				
C8168	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V		FL8102	1-234-177-21	FILTER, CHIP EMI				
C8197	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V								
C8198	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V				<IC>				
C8199	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V								
C8200	1-216-295-91	SHORT	0				IC8102	8-759-576-72	IC LF50CDT-TR				
C8201	1-216-295-91	SHORT	0				IC8103	8-759-579-68	IC AK4524				
							IC8104	8-759-542-87	IC S-80827ANUP-EDQ-T2				
C8202	1-107-823-11	CERAMIC CHIP	0.47MF	10%	16V		IC8105	8-759-651-20	IC TC9446F-002				
C8203	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V		IC8106	8-759-242-70	IC TC7WU04F				
C8204	1-107-823-11	CERAMIC CHIP	0.47MF	10%	16V								
C8205	1-163-253-11	CERAMIC CHIP	120PF	5%	50V		IC8107	8-759-459-69	IC S-80743AN-D7				
C8206	1-163-251-11	CERAMIC CHIP	100PF	5%	50V								
C8207	1-163-251-11	CERAMIC CHIP	100PF	5%	50V				<CHIP CONDUCTOR>				
C8208	1-163-251-11	CERAMIC CHIP	100PF	5%	50V								
C8209	1-163-251-11	CERAMIC CHIP	100PF	5%	50V		JR8102	1-216-295-91	SHORT	0			
C8210	1-163-251-11	CERAMIC CHIP	100PF	5%	50V		JR8103	1-216-295-91	SHORT	0			
C8211	1-115-340-11	CERAMIC CHIP	0.22MF	10%	25V								
C8212	1-125-838-91	CERAMIC CHIP	2.2MF	10%	6.3V				<COIL>				
C8213	1-125-838-91	CERAMIC CHIP	2.2MF	10%	6.3V								
C8218	1-163-251-11	CERAMIC CHIP	100PF	5%	50V		L8100	1-412-026-11	INDUCTOR CHIP	1UH			
							L8101	1-412-026-11	INDUCTOR CHIP	1UH			
							L8102	1-412-026-11	INDUCTOR CHIP	1UH			
		<CONNECTOR>					L8103	1-412-026-11	INDUCTOR CHIP	1UH			
							L8104	1-412-026-11	INDUCTOR CHIP	1UH			
CN8100	1-793-867-11	PIN, CONNECTOR (PC BORAD)	10P										
CN8101	1-793-867-11	PIN, CONNECTOR (PC BORAD)	10P				L8105	1-412-026-11	INDUCTOR CHIP	1UH			
		<FERRITE BEAD>							<RESISTOR>				
FB8100	1-216-295-91	SHORT	0				R8101	1-216-295-91	SHORT	0			
FB8101	1-216-295-91	SHORT	0				R8102	1-216-061-00	RES,CHIP	3.3K	5%	1/10W	
FB8102	1-216-295-91	SHORT	0				R8103	1-216-061-00	RES,CHIP	3.3K	5%	1/10W	
FB8103	1-216-295-91	SHORT	0				R8106	1-216-057-00	RES,CHIP	2.2K	5%	1/10W	
FB8104	1-414-598-11	INDUCTOR CHIP	0UH				R8107	1-216-057-00	RES,CHIP	2.2K	5%	1/10W	
FB8105	1-216-295-91	SHORT	0				R8120	1-216-049-91	RES,CHIP	1K	5%	1/10W	
FB8106	1-414-598-11	INDUCTOR CHIP	0UH				R8121	1-216-025-91	RES,CHIP	100	5%	1/10W	
FB8108	1-414-598-11	INDUCTOR CHIP	0UH				R8122	1-216-025-91	RES,CHIP	100	5%	1/10W	
FB8109	1-414-598-11	INDUCTOR CHIP	0UH				R8123	1-216-009-91	RES,CHIP	22	5%	1/10W	
FB8110	1-414-598-11	INDUCTOR CHIP	0UH				R8124	1-216-009-91	RES,CHIP	22	5%	1/10W	
FB8111	1-414-598-11	INDUCTOR CHIP	0UH				R8125	1-216-009-91	RES,CHIP	22	5%	1/10W	
FB8112	1-414-598-11	INDUCTOR CHIP	0UH				R8126	1-216-009-91	RES,CHIP	22	5%	1/10W	
FB8113	1-414-598-11	INDUCTOR CHIP	0UH				R8127	1-216-025-91	RES,CHIP	100	5%	1/10W	
FB8114	1-414-598-11	INDUCTOR CHIP	0UH				R8128	1-216-025-91	RES,CHIP	100	5%	1/10W	
FB8115	1-414-598-11	INDUCTOR CHIP	0UH				R8129	1-216-009-91	RES,CHIP	22	5%	1/10W	
FB8116	1-414-598-11	INDUCTOR CHIP	0UH				R8131	1-216-295-91	SHORT	0			
FB8117	1-414-598-11	INDUCTOR CHIP	0UH				R8133	1-216-129-00	RES,CHIP	2.2M	5%	1/10W	
FB8118	1-414-598-11	INDUCTOR CHIP	0UH				R8134	1-216-295-91	SHORT	0			
FB8119	1-414-598-11	INDUCTOR CHIP	0UH				R8135	1-216-295-91	SHORT	0			
FB8120	1-414-598-11	INDUCTOR CHIP	0UH				R8137	1-216-295-91	SHORT	0			
FB8121	1-414-598-11	INDUCTOR CHIP	0UH				R8138	1-216-049-91	RES,CHIP	1K	5%	1/10W	
							R8139	1-216-037-00	RES,CHIP	330	5%	1/10W	
							R8140	1-216-049-91	RES,CHIP	1K	5%	1/10W	
							R8141	1-216-295-91	SHORT	0			
							R8143	1-216-295-91	SHORT	0			

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REF. NO.	PART NO.	DESCRIPTION	REMARK
R8144	1-216-025-91	RES,CHIP	100 5% 1/10W
R8145	1-216-033-00	RES,CHIP	220 5% 1/10W
R8146	1-216-033-00	RES,CHIP	220 5% 1/10W
R8147	1-216-295-91	SHORT	0
R8148	1-216-295-91	SHORT	0
R8149	1-216-037-00	RES,CHIP	330 5% 1/10W
R8155	1-216-295-91	SHORT	0
R8157	1-216-037-00	RES,CHIP	330 5% 1/10W
R8158	1-216-037-00	RES,CHIP	330 5% 1/10W
R8161	1-216-025-91	RES,CHIP	100 5% 1/10W
R8168	1-216-025-91	RES,CHIP	100 5% 1/10W
R8169	1-216-097-91	RES,CHIP	100K 5% 1/10W
R8170	1-216-121-91	RES,CHIP	1M 5% 1/10W
R8171	1-216-025-91	RES,CHIP	100 5% 1/10W
R8172	1-216-025-91	RES,CHIP	100 5% 1/10W
R8173	1-216-025-91	RES,CHIP	100 5% 1/10W
R8200	1-216-073-00	RES,CHIP	10K 5% 1/10W
R8201	1-216-025-91	RES,CHIP	100 5% 1/10W
R8202	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R8203	1-208-782-11	METAL CHIP	1K 0.50% 1/10W
R8204	1-216-073-00	RES,CHIP	10K 5% 1/10W
R8205	1-208-782-11	METAL CHIP	1K 0.50% 1/10W
R8206	1-216-049-91	RES,CHIP	1K 5% 1/10W
R8207	1-216-091-00	RES,CHIP	56K 5% 1/10W
<CRYSTAL>			
X8102	1-781-041-11	VIBRATOR, CRYSTAL	
*****			
* A-1136-054-A B3 BOARD COMPLETE			
*****			
<CAPACITOR>			
C302	1-117-136-11	ELECT CHIP	10MF 20% 6.3V
C305	1-163-038-91	CERAMIC CHIP	0.1MF 25V
C306	1-163-038-91	CERAMIC CHIP	0.1MF 25V
C309	1-163-038-91	CERAMIC CHIP	0.1MF 25V
C310	1-163-038-91	CERAMIC CHIP	0.1MF 25V
C312	1-163-275-11	CERAMIC CHIP	0.001MF 5% 50V
C313	1-163-038-91	CERAMIC CHIP	0.1MF 25V
C314	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V
C315	1-163-251-11	CERAMIC CHIP	100PF 5% 50V
C316	1-163-038-91	CERAMIC CHIP	0.1MF 25V
C317	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C318	1-124-779-00	ELECT CHIP	10MF 20% 16V
C319	1-126-394-11	ELECT CHIP	10MF 20% 16V
C320	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C321	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C323	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C324	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C325	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C327	1-163-038-91	CERAMIC CHIP	0.1MF 25V
C330	1-163-038-91	CERAMIC CHIP	0.1MF 25V

REF. NO.	PART NO.	DESCRIPTION	REMARK
C331	1-163-038-91	CERAMIC CHIP	0.1MF 25V
C332	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C333	1-216-295-91	SHORT	0
C337	1-163-038-91	CERAMIC CHIP	0.1MF 25V
C338	1-163-038-91	CERAMIC CHIP	0.1MF 25V
C339	1-163-038-91	CERAMIC CHIP	0.1MF 25V
C340	1-163-038-91	CERAMIC CHIP	0.1MF 25V
C341	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C346	1-163-038-91	CERAMIC CHIP	0.1MF 25V
C347	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C349	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C350	1-126-396-11	ELECT CHIP	47MF 20% 16V
C353	1-126-204-11	ELECT CHIP	47MF 20% 16V
C354	1-117-136-11	ELECT CHIP	10MF 20% 6.3V
C355	1-117-136-11	ELECT CHIP	10MF 20% 6.3V
C361	1-124-779-00	ELECT CHIP	10MF 20% 16V
C362	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C363	1-163-017-00	CERAMIC CHIP	0.0047MF 10% 50V
C501	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C502	1-124-779-00	ELECT CHIP	10MF 20% 16V
C503	1-124-779-00	ELECT CHIP	10MF 20% 16V
C505	1-124-779-00	ELECT CHIP	10MF 20% 16V
C507	1-124-779-00	ELECT CHIP	10MF 20% 16V
C509	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C510	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C511	1-163-038-91	CERAMIC CHIP	0.1MF 25V
C512	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C514	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V
C515	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C516	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V
C517	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C518	1-126-204-11	ELECT CHIP	47MF 20% 16V
C519	1-163-038-91	CERAMIC CHIP	0.1MF 25V
C520	1-163-038-91	CERAMIC CHIP	0.1MF 25V
C521	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C522	1-163-038-91	CERAMIC CHIP	0.1MF 25V
C523	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C524	1-124-779-00	ELECT CHIP	10MF 20% 16V
C525	1-126-394-11	ELECT CHIP	10MF 20% 16V
C526	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C527	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V
C528	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C530	1-216-295-91	SHORT	0
C532	1-216-295-91	SHORT	0
C534	1-216-295-91	SHORT	0
C535	1-163-038-91	CERAMIC CHIP	0.1MF 25V
C536	1-163-038-91	CERAMIC CHIP	0.1MF 25V
C537	1-163-038-91	CERAMIC CHIP	0.1MF 25V
C538	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C539	1-126-204-11	ELECT CHIP	47MF 20% 16V
C540	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C542	1-126-204-11	ELECT CHIP	47MF 20% 16V
C543	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C545	1-126-396-11	ELECT CHIP	47MF 20% 16V
C546	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C548	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
C549	1-126-204-11	ELECT CHIP	47MF 20% 16V

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REF. NO.	PART NO.	DESCRIPTION			REMARK	REF. NO.	PART NO.	DESCRIPTION			REMARK
C550	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C808	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C551	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C809	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C554	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C810	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C555	1-163-038-91	CERAMIC CHIP	0.1MF		25V	C811	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C556	1-126-392-11	ELECT CHIP	100MF	20%	6.3V	C812	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C557	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C813	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C559	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C814	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C560	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C815	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C601	1-126-394-11	ELECT CHIP	10MF	20%	16V	C816	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C602	1-126-394-11	ELECT CHIP	10MF	20%	16V	C817	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C603	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C818	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C604	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C819	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C605	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C820	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C606	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C821	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C607	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C822	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C608	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C823	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C609	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C824	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C610	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C825	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C611	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C826	1-164-489-11	CERAMIC CHIP	0.22MF	10%	16V
C612	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C827	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C613	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C829	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C614	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C834	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C615	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C835	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C616	1-126-396-11	ELECT CHIP	47MF	20%	16V	C837	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C617	1-163-038-91	CERAMIC CHIP	0.1MF		25V	C839	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C618	1-163-038-91	CERAMIC CHIP	0.1MF		25V	C840	1-126-206-11	ELECT CHIP	100MF	20%	6.3V
C619	1-163-038-91	CERAMIC CHIP	0.1MF		25V	C841	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C620	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C842	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C621	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C843	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C622	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C844	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C623	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C848	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C624	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C849	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C625	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C850	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C626	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C851	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C627	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C852	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C628	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C853	1-164-182-11	CERAMIC CHIP	0.0033MF	10%	50V
C629	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C854	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C630	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C901	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C631	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C902	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C632	1-126-206-11	ELECT CHIP	100MF	20%	6.3V	C903	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C633	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C904	1-124-779-00	ELECT CHIP	10MF	20%	16V
C634	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C905	1-109-982-11	CERAMIC CHIP	1MF	10%	10V
C635	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C906	1-124-779-00	ELECT CHIP	10MF	20%	16V
C636	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C907	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C637	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C908	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C638	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C909	1-126-396-11	ELECT CHIP	47MF	20%	16V
C639	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C910	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C640	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C913	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C642	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C914	1-126-394-11	ELECT CHIP	10MF	20%	16V
C643	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V	C950	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C644	1-126-398-11	ELECT CHIP	4.7MF	20%	35V	C954	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C645	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V						
C801	1-124-779-00	ELECT CHIP	10MF	20%	16V						
C802	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V						
C803	1-124-779-00	ELECT CHIP	10MF	20%	16V						
C804	1-124-779-00	ELECT CHIP	10MF	20%	16V						
C806	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V						
C807	1-124-779-00	ELECT CHIP	10MF	20%	16V						

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The components identified by shading and mark  $\triangle$  are critical for safety. Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
		<CONNECTOR>				<IC>	
CN502	1-695-302-11	CONNECTOR, BOARD TO BOARD 50P		IC302	8-752-388-98	IC CXD2303AQ	
		<DIODE>		IC303	8-752-088-27	IC CXA3266Q-T6	
D301	8-719-041-97	DIODE MA113-(TX)		IC309	8-759-640-16	IC TC7SET04F(TE85R)	
D302	8-719-041-97	DIODE MA113-(TX)		IC311	8-759-708-05	IC NJM78L05A	
D501	8-719-422-12	DIODE MA8039		IC501	8-759-447-90	IC TLC5733AIPM	
D601	8-719-073-01	DIODE MA111-(K8).S0		IC504	8-759-430-32	IC TLC2933IPWR	
		<FERRITE BEAD>		IC505	8-759-640-16	IC TC7SET04F(TE85R)	
FB501	1-414-813-11	FERRITE 0UH		IC506	8-759-640-16	IC TC7SET04F(TE85R)	
FB502	1-414-813-11	FERRITE 0UH		IC601	8-752-398-47	IC CXD2090Q	
FB503	1-414-813-11	FERRITE 0UH		IC602	8-759-567-37	IC MB81F161622B-80FN	
FB504	1-414-813-11	FERRITE 0UH		IC603 $\triangle$	8-749-010-64	IC TLC2932IPW	
FB601	1-414-553-11	FERRITE 0UH		IC604	8-752-072-94	IC CXA1875AM-T4	
FB801	1-414-553-11	FERRITE 0UH		IC801	8-759-592-40	IC CXD9509Q	
FB802	1-414-553-11	FERRITE 0UH		IC802	8-759-595-53	IC MB81F643242B-10FN	
		<FILTER>		IC803	8-759-460-29	IC PST9120NL	
FL304	1-234-177-21	FILTER, CHIP EMI		IC901	8-752-367-59	IC CXD2309Q	
FL305	1-234-177-21	FILTER, CHIP EMI		IC902	8-759-648-21	IC MB94918-APF-G-121-BND	
FL306	1-239-558-11	FILTER, CHIP EMI		IC903	8-759-527-75	IC M24C04-MN6T	
FL501	1-233-877-11	FILTER, LOW PASS		IC904	8-759-349-11	IC PST9145NL	
FL502	1-233-504-21	FILTER, LOW PASS				<COIL>	
FL503	1-233-504-21	FILTER, LOW PASS		L302	1-412-029-11	INDUCTOR CHIP 10UH	
FL504	1-234-177-21	FILTER, CHIP EMI		L303	1-412-029-11	INDUCTOR CHIP 10UH	
FL505	1-234-177-21	FILTER, CHIP EMI		L501	1-412-026-11	INDUCTOR CHIP 1UH	
FL506	1-234-177-21	FILTER, CHIP EMI		L502	1-412-026-11	INDUCTOR CHIP 1UH	
FL508	1-234-177-21	FILTER, CHIP EMI		L503	1-412-026-11	INDUCTOR CHIP 1UH	
FL509	1-234-177-21	FILTER, CHIP EMI		L504	1-412-026-11	INDUCTOR CHIP 1UH	
FL510	1-234-177-21	FILTER, CHIP EMI		L505	1-412-029-11	INDUCTOR CHIP 10UH	
FL511	1-234-177-21	FILTER, CHIP EMI		L506	1-412-026-11	INDUCTOR CHIP 1UH	
FL512	1-234-177-21	FILTER, CHIP EMI		L508	1-412-029-11	INDUCTOR CHIP 10UH	
FL601	1-234-177-21	FILTER, CHIP EMI		L509	1-412-029-11	INDUCTOR CHIP 10UH	
FL602	1-234-177-21	FILTER, CHIP EMI		L511	1-412-026-11	INDUCTOR CHIP 1UH	
FL603	1-234-177-21	FILTER, CHIP EMI		L512	1-412-026-11	INDUCTOR CHIP 1UH	
FL606	1-239-560-11	FILTER, CHIP EMI		L604	1-412-029-11	INDUCTOR CHIP 10UH	
FL801	1-234-177-21	FILTER, CHIP EMI		L605	1-412-029-11	INDUCTOR CHIP 10UH	
FL802	1-234-177-21	FILTER, CHIP EMI				<TRANSISTOR>	
FL803	1-234-177-21	FILTER, CHIP EMI		Q501	8-729-216-22	TRANSISTOR 2SA1162-G	
FL804	1-234-177-21	FILTER, CHIP EMI		Q502	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
FL805	1-234-177-21	FILTER, CHIP EMI		Q503	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
FL806	1-234-177-21	FILTER, CHIP EMI		Q510	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
FL807	1-234-177-21	FILTER, CHIP EMI		Q511	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
FL808	1-234-177-21	FILTER, CHIP EMI		Q512	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
FL810	1-234-177-21	FILTER, CHIP EMI		Q513	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
FL901	1-233-878-11	FILTER, LOW PASS		Q514	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
FL902	1-233-876-11	FILTER, LOW PASS		Q515	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
FL903	1-233-876-11	FILTER, LOW PASS		Q516	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
FL904	1-234-177-21	FILTER, CHIP EMI		Q517	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
FL905	1-234-177-21	FILTER, CHIP EMI		Q518	8-729-216-22	TRANSISTOR 2SA1162-G	
FL906	1-234-177-21	FILTER, CHIP EMI		Q519	1-801-806-11	TRANSISTOR DTC144EKA-T146	
FL907	1-234-177-21	FILTER, CHIP EMI		Q520	1-801-806-11	TRANSISTOR DTC144EKA-T146	
				Q521	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
				Q522	8-729-120-28	TRANSISTOR 2SC1623-L5L6	

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
Q523	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R518	1-216-295-91	SHORT	0
Q524	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R520	1-216-645-11	METAL CHIP	560 0.50% 1/10W
Q601	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R521	1-216-295-91	SHORT	0
Q602	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R523	1-216-645-11	METAL CHIP	560 0.50% 1/10W
Q901	8-729-216-22	TRANSISTOR 2SA1162-G		R524	1-216-295-91	SHORT	0
Q902	8-729-216-22	TRANSISTOR 2SA1162-G		R526	1-216-645-11	METAL CHIP	560 0.50% 1/10W
Q903	8-729-216-22	TRANSISTOR 2SA1162-G		R528	1-216-037-00	RES,CHIP	330 5% 1/10W
Q904	8-729-028-28	TRANSISTOR 2SK2036(TE85L)		R529	1-216-669-11	METAL CHIP	5.6K 0.50% 1/10W
Q905	8-729-028-28	TRANSISTOR 2SK2036(TE85L)		R530	1-216-669-11	METAL CHIP	5.6K 0.50% 1/10W
Q906	1-801-806-11	TRANSISTOR DTC144EKA-T146		R531	1-216-031-00	RES,CHIP	180 5% 1/10W
Q907	8-729-216-22	TRANSISTOR 2SA1162-G		R532	1-216-669-11	METAL CHIP	5.6K 0.50% 1/10W
Q908	8-729-216-22	TRANSISTOR 2SA1162-G		R533	1-216-031-00	RES,CHIP	180 5% 1/10W
Q909	8-729-216-22	TRANSISTOR 2SA1162-G		R536	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
<RESISTOR>				R537	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W
R302	1-216-013-00	RES,CHIP	33 5% 1/10W	R540	1-216-049-91	RES,CHIP	1K 5% 1/10W
R303	1-216-667-11	METAL CHIP	4.7K 0.50% 1/10W	R548	1-216-619-11	METAL CHIP	47 0.50% 1/10W
R305	1-216-049-91	RES,CHIP	1K 5% 1/10W	R549	1-216-619-11	METAL CHIP	47 0.50% 1/10W
R306	1-216-658-11	METAL CHIP	2K 0.50% 1/10W	R550	1-216-625-11	METAL CHIP	82 0.50% 1/10W
R309	1-216-009-91	RES,CHIP	22 5% 1/10W	R551	1-216-625-11	METAL CHIP	82 0.50% 1/10W
R310	1-216-009-91	RES,CHIP	22 5% 1/10W	R552	1-216-619-11	METAL CHIP	47 0.50% 1/10W
R311	1-216-009-91	RES,CHIP	22 5% 1/10W	R553	1-216-295-91	SHORT	0
R313	1-216-009-91	RES,CHIP	22 5% 1/10W	R554	1-216-619-11	METAL CHIP	47 0.50% 1/10W
R316	1-216-009-91	RES,CHIP	22 5% 1/10W	R555	1-216-077-91	RES,CHIP	15K 5% 1/10W
R318	1-216-009-91	RES,CHIP	22 5% 1/10W	R557	1-216-049-91	RES,CHIP	1K 5% 1/10W
R319	1-216-049-91	RES,CHIP	1K 5% 1/10W	R558	1-216-025-91	RES,CHIP	100 5% 1/10W
R321	1-216-009-91	RES,CHIP	22 5% 1/10W	R559	1-216-077-91	RES,CHIP	15K 5% 1/10W
R323	1-216-009-91	RES,CHIP	22 5% 1/10W	R560	1-216-619-11	METAL CHIP	47 0.50% 1/10W
R324	1-216-009-91	RES,CHIP	22 5% 1/10W	R561	1-216-043-91	RES,CHIP	560 5% 1/10W
R325	1-216-073-00	RES,CHIP	10K 5% 1/10W	R562	1-216-043-91	RES,CHIP	560 5% 1/10W
R328	1-216-025-91	RES,CHIP	100 5% 1/10W	R571	1-216-295-91	SHORT	0
R333	1-216-295-91	SHORT	0	R572	1-216-619-11	METAL CHIP	47 0.50% 1/10W
R335	1-216-013-00	RES,CHIP	33 5% 1/10W	R573	1-216-679-11	METAL CHIP	15K 0.50% 1/10W
R336	1-216-013-00	RES,CHIP	33 5% 1/10W	R574	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R337	1-216-097-91	RES,CHIP	100K 5% 1/10W	R575	1-216-625-11	METAL CHIP	82 0.50% 1/10W
R338	1-216-295-91	SHORT	0	R576	1-216-625-11	METAL CHIP	82 0.50% 1/10W
R339	1-216-295-91	SHORT	0	R577	1-216-619-11	METAL CHIP	47 0.50% 1/10W
R343	1-216-295-91	SHORT	0	R578	1-216-619-11	METAL CHIP	47 0.50% 1/10W
R347	1-216-295-91	SHORT	0	R579	1-216-077-91	RES,CHIP	15K 5% 1/10W
R350	1-216-295-91	SHORT	0	R580	1-216-295-91	SHORT	0
R501	1-216-025-91	RES,CHIP	100 5% 1/10W	R582	1-216-041-00	RES,CHIP	470 5% 1/10W
R502	1-216-025-91	RES,CHIP	100 5% 1/10W	R584	1-216-041-00	RES,CHIP	470 5% 1/10W
R503	1-216-295-91	SHORT	0	R586	1-216-049-91	RES,CHIP	1K 5% 1/10W
R504	1-216-295-91	SHORT	0	R587	1-216-049-91	RES,CHIP	1K 5% 1/10W
R505	1-216-295-91	SHORT	0	R589	1-216-049-91	RES,CHIP	1K 5% 1/10W
R506	1-216-025-91	RES,CHIP	100 5% 1/10W	R590	1-216-049-91	RES,CHIP	1K 5% 1/10W
R507	1-216-025-91	RES,CHIP	100 5% 1/10W	R591	1-216-049-91	RES,CHIP	1K 5% 1/10W
R508	1-216-025-91	RES,CHIP	100 5% 1/10W	R592	1-216-049-91	RES,CHIP	1K 5% 1/10W
R509	1-216-025-91	RES,CHIP	100 5% 1/10W	R594	1-216-041-00	RES,CHIP	470 5% 1/10W
R510	1-216-043-91	RES,CHIP	560 5% 1/10W	R596	1-216-049-91	RES,CHIP	1K 5% 1/10W
R511	1-216-043-91	RES,CHIP	560 5% 1/10W	R597	1-216-073-00	RES,CHIP	10K 5% 1/10W
R512	1-216-043-91	RES,CHIP	560 5% 1/10W	R598	1-216-025-91	RES,CHIP	100 5% 1/10W
R513	1-216-043-91	RES,CHIP	560 5% 1/10W	R600	1-216-066-00	RES,CHIP	5.1K 5% 1/10W
R514	1-216-043-91	RES,CHIP	560 5% 1/10W	R601	1-216-073-00	RES,CHIP	10K 5% 1/10W
R515	1-216-043-91	RES,CHIP	560 5% 1/10W	R602	1-216-073-00	RES,CHIP	10K 5% 1/10W
R516	1-216-049-91	RES,CHIP	1K 5% 1/10W	R603	1-216-073-00	RES,CHIP	10K 5% 1/10W
R517	1-216-049-91	RES,CHIP	1K 5% 1/10W	R604	1-216-033-00	RES,CHIP	220 5% 1/10W
				R605	1-216-295-91	SHORT	0

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REF. NO.	PART NO.	DESCRIPTION	REMARK
R608	1-216-295-91	SHORT	0
R609	1-216-073-00	RES,CHIP	10K 5% 1/10W
R610	1-216-033-00	RES,CHIP	220 5% 1/10W
R611	1-216-073-00	RES,CHIP	10K 5% 1/10W
R612	1-216-073-00	RES,CHIP	10K 5% 1/10W
R613	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R615	1-216-089-91	RES,CHIP	47K 5% 1/10W
R616	1-216-073-00	RES,CHIP	10K 5% 1/10W
R617	1-216-295-91	SHORT	0
R619	1-216-073-00	RES,CHIP	10K 5% 1/10W
R621	1-216-295-91	SHORT	0
R622	1-216-295-91	SHORT	0
R623	1-216-295-91	SHORT	0
R624	1-216-295-91	SHORT	0
R625	1-216-295-91	SHORT	0
R626	1-216-073-00	RES,CHIP	10K 5% 1/10W
R628	1-216-295-91	SHORT	0
R629	1-216-073-00	RES,CHIP	10K 5% 1/10W
R631	1-216-295-91	SHORT	0
R634	1-216-295-91	SHORT	0
R635	1-216-295-91	SHORT	0
R638	1-216-295-91	SHORT	0
R639	1-216-017-91	RES,CHIP	47 5% 1/10W
R640	1-216-009-91	RES,CHIP	22 5% 1/10W
R642	1-216-295-91	SHORT	0
R643	1-216-295-91	SHORT	0
R645	1-216-295-91	SHORT	0
R651	1-216-295-91	SHORT	0
R653	1-216-025-91	RES,CHIP	100 5% 1/10W
R654	1-216-033-00	RES,CHIP	220 5% 1/10W
R655	1-216-295-91	SHORT	0
R657	1-216-009-91	RES,CHIP	22 5% 1/10W
R658	1-216-049-91	RES,CHIP	1K 5% 1/10W
R659	1-216-025-91	RES,CHIP	100 5% 1/10W
R660	1-216-025-91	RES,CHIP	100 5% 1/10W
R661	1-216-025-91	RES,CHIP	100 5% 1/10W
R664	1-216-009-91	RES,CHIP	22 5% 1/10W
R665	1-216-035-00	RES,CHIP	270 5% 1/10W
R666	1-216-646-11	METAL CHIP	620 0.50% 1/10W
R667	1-216-663-11	METAL CHIP	3.3K 0.50% 1/10W
R668	1-216-009-91	RES,CHIP	22 5% 1/10W
R670	1-216-295-91	SHORT	0
R671	1-216-073-00	RES,CHIP	10K 5% 1/10W
R672	1-216-073-00	RES,CHIP	10K 5% 1/10W
R673	1-216-073-00	RES,CHIP	10K 5% 1/10W
R674	1-216-073-00	RES,CHIP	10K 5% 1/10W
R675	1-216-073-00	RES,CHIP	10K 5% 1/10W
R676	1-216-073-00	RES,CHIP	10K 5% 1/10W
R677	1-216-073-00	RES,CHIP	10K 5% 1/10W
R678	1-216-073-00	RES,CHIP	10K 5% 1/10W
R679	1-216-073-00	RES,CHIP	10K 5% 1/10W
R680	1-216-073-00	RES,CHIP	10K 5% 1/10W
R681	1-216-073-00	RES,CHIP	10K 5% 1/10W
R682	1-216-073-00	RES,CHIP	10K 5% 1/10W
R683	1-216-073-00	RES,CHIP	10K 5% 1/10W
R684	1-216-073-00	RES,CHIP	10K 5% 1/10W
R685	1-216-073-00	RES,CHIP	10K 5% 1/10W
R686	1-216-073-00	RES,CHIP	10K 5% 1/10W

REF. NO.	PART NO.	DESCRIPTION	REMARK
R687	1-216-295-91	SHORT	0
R688	1-216-061-00	RES,CHIP	3.3K 5% 1/10W
R689	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R690	1-216-295-91	SHORT	0
R691	1-216-061-00	RES,CHIP	3.3K 5% 1/10W
R692	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R693	1-216-009-91	RES,CHIP	22 5% 1/10W
R694	1-216-295-91	SHORT	0
R695	1-216-047-91	RES,CHIP	820 5% 1/10W
R696	1-216-049-91	RES,CHIP	1K 5% 1/10W
R697	1-216-117-00	RES,CHIP	680K 5% 1/10W
R698	1-216-117-00	RES,CHIP	680K 5% 1/10W
R699	1-216-295-91	SHORT	0
R801	1-216-009-91	RES,CHIP	22 5% 1/10W
R802	1-216-009-91	RES,CHIP	22 5% 1/10W
R804	1-216-073-00	RES,CHIP	10K 5% 1/10W
R806	1-216-675-91	METAL CHIP	10K 0.50% 1/10W
R807	1-216-637-11	METAL CHIP	270 0.50% 1/10W
R812	1-216-073-00	RES,CHIP	10K 5% 1/10W
R813	1-216-295-91	SHORT	0
R814	1-216-073-00	RES,CHIP	10K 5% 1/10W
R815	1-216-073-00	RES,CHIP	10K 5% 1/10W
R816	1-216-073-00	RES,CHIP	10K 5% 1/10W
R817	1-216-613-11	METAL CHIP	27 0.50% 1/10W
R818	1-216-295-91	SHORT	0
R820	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R822	1-216-295-91	SHORT	0
R823	1-216-073-00	RES,CHIP	10K 5% 1/10W
R824	1-216-073-00	RES,CHIP	10K 5% 1/10W
R825	1-216-621-11	METAL CHIP	56 0.50% 1/10W
R826	1-216-641-11	METAL CHIP	390 0.50% 1/10W
R827	1-216-607-11	METAL CHIP	15 0.50% 1/10W
R834	1-216-629-11	METAL CHIP	120 0.50% 1/10W
R835	1-216-623-11	METAL CHIP	68 0.50% 1/10W
R836	1-216-611-11	METAL CHIP	22 0.50% 1/10W
R840	1-216-295-91	SHORT	0
R844	1-216-009-91	RES,CHIP	22 5% 1/10W
R845	1-216-009-91	RES,CHIP	22 5% 1/10W
R846	1-216-009-91	RES,CHIP	22 5% 1/10W
R847	1-216-009-91	RES,CHIP	22 5% 1/10W
R848	1-216-009-91	RES,CHIP	22 5% 1/10W
R849	1-216-009-91	RES,CHIP	22 5% 1/10W
R850	1-216-009-91	RES,CHIP	22 5% 1/10W
R851	1-216-009-91	RES,CHIP	22 5% 1/10W
R852	1-216-009-91	RES,CHIP	22 5% 1/10W
R853	1-216-009-91	RES,CHIP	22 5% 1/10W
R854	1-216-009-91	RES,CHIP	22 5% 1/10W
R855	1-216-009-91	RES,CHIP	22 5% 1/10W
R856	1-216-009-91	RES,CHIP	22 5% 1/10W
R857	1-216-009-91	RES,CHIP	22 5% 1/10W
R858	1-216-009-91	RES,CHIP	22 5% 1/10W
R859	1-216-009-91	RES,CHIP	22 5% 1/10W
R860	1-216-009-91	RES,CHIP	22 5% 1/10W
R861	1-216-009-91	RES,CHIP	22 5% 1/10W
R862	1-216-009-91	RES,CHIP	22 5% 1/10W
R863	1-216-009-91	RES,CHIP	22 5% 1/10W
R864	1-216-009-91	RES,CHIP	22 5% 1/10W

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R865	1-216-009-91	RES,CHIP	22 5% 1/10W	R935	1-216-073-00	RES,CHIP	10K 5% 1/10W
R866	1-216-009-91	RES,CHIP	22 5% 1/10W	R936	1-216-041-00	RES,CHIP	470 5% 1/10W
R867	1-216-009-91	RES,CHIP	22 5% 1/10W	R937	1-216-025-91	RES,CHIP	100 5% 1/10W
R868	1-216-009-91	RES,CHIP	22 5% 1/10W	R938	1-216-025-91	RES,CHIP	100 5% 1/10W
R869	1-216-009-91	RES,CHIP	22 5% 1/10W	R939	1-216-295-91	SHORT	0
R870	1-216-009-91	RES,CHIP	22 5% 1/10W	R940	1-216-295-91	SHORT	0
R871	1-216-009-91	RES,CHIP	22 5% 1/10W	R941	1-216-295-91	SHORT	0
R872	1-216-009-91	RES,CHIP	22 5% 1/10W	R942	1-216-037-00	RES,CHIP	330 5% 1/10W
R873	1-216-009-91	RES,CHIP	22 5% 1/10W	R943	1-216-033-00	RES,CHIP	220 5% 1/10W
R874	1-216-009-91	RES,CHIP	22 5% 1/10W	R944	1-216-295-91	SHORT	0
R875	1-216-009-91	RES,CHIP	22 5% 1/10W	R945	1-216-295-91	SHORT	0
R876	1-216-009-91	RES,CHIP	22 5% 1/10W	R951	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R877	1-216-009-91	RES,CHIP	22 5% 1/10W	R952	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R878	1-216-009-91	RES,CHIP	22 5% 1/10W	R953	1-216-295-91	SHORT	0
R879	1-216-009-91	RES,CHIP	22 5% 1/10W	R954	1-216-295-91	SHORT	0
R880	1-216-009-91	RES,CHIP	22 5% 1/10W	R955	1-216-295-91	SHORT	0
R881	1-216-009-91	RES,CHIP	22 5% 1/10W	R956	1-216-089-91	RES,CHIP	47K 5% 1/10W
R882	1-216-009-91	RES,CHIP	22 5% 1/10W	R957	1-216-635-11	METAL CHIP	220 0.50% 1/10W
R883	1-216-009-91	RES,CHIP	22 5% 1/10W	R958	1-216-635-11	METAL CHIP	220 0.50% 1/10W
R884	1-216-009-91	RES,CHIP	22 5% 1/10W	R959	1-216-635-11	METAL CHIP	220 0.50% 1/10W
R885	1-216-009-91	RES,CHIP	22 5% 1/10W	R960	1-216-635-11	METAL CHIP	220 0.50% 1/10W
R886	1-216-009-91	RES,CHIP	22 5% 1/10W	R961	1-216-635-11	METAL CHIP	220 0.50% 1/10W
R887	1-216-009-91	RES,CHIP	22 5% 1/10W	R962	1-216-635-11	METAL CHIP	220 0.50% 1/10W
R888	1-216-009-91	RES,CHIP	22 5% 1/10W	R979	1-216-295-91	SHORT	0
R889	1-216-009-91	RES,CHIP	22 5% 1/10W	R981	1-216-037-00	RES,CHIP	330 5% 1/10W
R890	1-216-009-91	RES,CHIP	22 5% 1/10W	R982	1-216-037-00	RES,CHIP	330 5% 1/10W
R891	1-216-009-91	RES,CHIP	22 5% 1/10W	R983	1-216-089-91	RES,CHIP	47K 5% 1/10W
R892	1-216-009-91	RES,CHIP	22 5% 1/10W	R984	1-216-061-00	RES,CHIP	3.3K 5% 1/10W
R893	1-216-009-91	RES,CHIP	22 5% 1/10W	R985	1-216-113-00	RES,CHIP	470K 5% 1/10W
R894	1-216-009-91	RES,CHIP	22 5% 1/10W	R986	1-216-061-00	RES,CHIP	3.3K 5% 1/10W
R895	1-216-009-91	RES,CHIP	22 5% 1/10W	R987	1-216-049-91	RES,CHIP	1K 5% 1/10W
R896	1-216-009-91	RES,CHIP	22 5% 1/10W	R988	1-216-033-00	RES,CHIP	220 5% 1/10W
R897	1-216-009-91	RES,CHIP	22 5% 1/10W	R989	1-216-081-00	RES,CHIP	22K 5% 1/10W
R898	1-216-009-91	RES,CHIP	22 5% 1/10W	R990	1-216-113-00	RES,CHIP	470K 5% 1/10W
R899	1-216-073-00	RES,CHIP	10K 5% 1/10W	R991	1-216-295-91	SHORT	0
R901	1-216-061-00	RES,CHIP	3.3K 5% 1/10W	R993	1-216-089-91	RES,CHIP	47K 5% 1/10W
R902	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W	R994	1-216-033-00	RES,CHIP	220 5% 1/10W
R903	1-216-663-11	METAL CHIP	3.3K 0.50% 1/10W	R995	1-216-033-00	RES,CHIP	220 5% 1/10W
R904	1-216-635-11	METAL CHIP	220 0.50% 1/10W	R996	1-216-037-00	RES,CHIP	330 5% 1/10W
R905	1-216-635-11	METAL CHIP	220 0.50% 1/10W	R997	1-216-037-00	RES,CHIP	330 5% 1/10W
R906	1-216-635-11	METAL CHIP	220 0.50% 1/10W	R998	1-216-073-00	RES,CHIP	10K 5% 1/10W
R907	1-216-635-11	METAL CHIP	220 0.50% 1/10W	R2801	1-216-629-11	METAL CHIP	120 0.50% 1/10W
R908	1-216-635-11	METAL CHIP	220 0.50% 1/10W	R2802	1-216-623-11	METAL CHIP	68 0.50% 1/10W
R909	1-216-635-11	METAL CHIP	220 0.50% 1/10W	R2803	1-216-603-11	METAL CHIP	10 0.50% 1/10W
R910	1-216-049-91	RES,CHIP	1K 5% 1/10W	R2804	1-216-627-11	METAL CHIP	100 0.50% 1/10W
R911	1-216-049-91	RES,CHIP	1K 5% 1/10W	R2805	1-216-623-11	METAL CHIP	68 0.50% 1/10W
R912	1-216-049-91	RES,CHIP	1K 5% 1/10W	R2806	1-216-611-11	METAL CHIP	22 0.50% 1/10W
R914	1-216-065-91	RES,CHIP	4.7K 5% 1/10W	R2809	1-216-295-91	SHORT	0
R916	1-216-065-91	RES,CHIP	4.7K 5% 1/10W	R2810	1-216-295-91	SHORT	0
R923	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R2813	1-216-295-91	SHORT	0
R926	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R2815	1-216-295-91	SHORT	0
R927	1-216-295-91	SHORT	0	R2817	1-216-295-91	SHORT	0
R929	1-216-025-91	RES,CHIP	100 5% 1/10W	R2818	1-216-295-91	SHORT	0
R930	1-216-025-91	RES,CHIP	100 5% 1/10W	R2820	1-216-295-91	SHORT	0
R931	1-216-041-00	RES,CHIP	470 5% 1/10W	R2822	1-216-295-91	SHORT	0
R933	1-216-025-91	RES,CHIP	100 5% 1/10W				
R934	1-216-025-91	RES,CHIP	100 5% 1/10W				

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# BC4

REF. NO.	PART NO.	DESCRIPTION	REMARK	
RB001	1-239-409-11	NETWORK RESISTOR (CHIP)	47	
RB002	1-239-409-11	NETWORK RESISTOR (CHIP)	47	
RB003	1-239-409-11	NETWORK RESISTOR (CHIP)	47	
RB004	1-239-409-11	NETWORK RESISTOR (CHIP)	47	
RB005	1-239-409-11	NETWORK RESISTOR (CHIP)	47	
RB006	1-239-409-11	NETWORK RESISTOR (CHIP)	47	
RB007	1-239-414-11	NETWORK RESISTOR (CHIP)	150	
RB008	1-239-414-11	NETWORK RESISTOR (CHIP)	150	
RB009	1-239-414-11	NETWORK RESISTOR (CHIP)	150	
RB010	1-239-414-11	NETWORK RESISTOR (CHIP)	150	
RB011	1-239-414-11	NETWORK RESISTOR (CHIP)	150	
RB012	1-239-414-11	NETWORK RESISTOR (CHIP)	150	
RB013	1-239-621-11	NETWORK RESISTOR (CHIP)	22	
RB014	1-239-621-11	NETWORK RESISTOR (CHIP)	22	
RB015	1-239-621-11	NETWORK RESISTOR (CHIP)	22	
RB016	1-239-621-11	NETWORK RESISTOR (CHIP)	22	
RB017	1-239-621-11	NETWORK RESISTOR (CHIP)	22	
RB018	1-239-621-11	NETWORK RESISTOR (CHIP)	22	
RB019	1-239-409-11	NETWORK RESISTOR (CHIP)	47	
RB020	1-239-409-11	NETWORK RESISTOR (CHIP)	47	
RB021	1-239-409-11	NETWORK RESISTOR (CHIP)	47	
RB022	1-239-409-11	NETWORK RESISTOR (CHIP)	47	
RB023	1-239-409-11	NETWORK RESISTOR (CHIP)	47	
RB024	1-239-409-11	NETWORK RESISTOR (CHIP)	47	
RB025	1-239-409-11	NETWORK RESISTOR (CHIP)	47	
RB026	1-239-409-11	NETWORK RESISTOR (CHIP)	47	
RB027	1-239-409-11	NETWORK RESISTOR (CHIP)	47	
RB301	1-239-621-11	NETWORK RESISTOR (CHIP)	22	
RB302	1-239-621-11	NETWORK RESISTOR (CHIP)	22	
RB701	1-239-711-91	NETWORK RESISTOR (CHIP)	0	
RB702	1-239-711-91	NETWORK RESISTOR (CHIP)	0	
RB703	1-239-711-91	NETWORK RESISTOR (CHIP)	0	
RB704	1-239-711-91	NETWORK RESISTOR (CHIP)	0	
RB705	1-239-711-91	NETWORK RESISTOR (CHIP)	0	
RB706	1-239-711-91	NETWORK RESISTOR (CHIP)	0	
<CRYSTAL>				
X801	1-781-649-21	OSCILLATOR, CRYSTAL		
X802	1-781-650-21	VIBRATOR, CRYSTAL		
X901	1-760-014-11	VIBRATOR, CERAMIC		
*****				
* A-1136-069-A		BC4 BOARD COMPLETE		
*****				
<CAPACITOR>				
C2003	1-163-031-11	CERAMIC CHIP	0.01MF	50V
C2005	1-163-131-00	CERAMIC CHIP	390PF	50V
C2006	1-163-038-91	CERAMIC CHIP	0.1MF	25V
C2010	1-163-102-00	CERAMIC CHIP	24PF	50V
C2011	1-163-102-00	CERAMIC CHIP	24PF	50V
C2015	1-165-319-11	CERAMIC CHIP	0.1MF	50V
C2016	1-165-319-11	CERAMIC CHIP	0.1MF	50V

REF. NO.	PART NO.	DESCRIPTION			REMARK
C2017	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C2018	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C2021	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C2024	1-216-295-91	SHORT	0		
C2029	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C2030	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C2031	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C2032	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C2033	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C2034	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C2035	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C2036	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C2037	1-104-664-11	ELECT	47MF	20%	16V
C2038	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C2039	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C2040	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C2041	1-126-924-11	ELECT	330MF	20%	6.3V
C2042	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C2044	1-104-664-11	ELECT	47MF	20%	16V
C2045	1-163-106-00	CERAMIC CHIP	36PF	5%	50V
C2046	1-126-964-11	ELECT	10MF	20%	50V
C2047	1-164-505-11	CERAMIC CHIP	2.2MF		16V
C2048	1-126-964-11	ELECT	10MF	20%	50V
C2049	1-126-960-11	ELECT	1MF	20%	50V
C2050	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C2051	1-126-964-11	ELECT	10MF	20%	50V
C2052	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C2053	1-126-960-11	ELECT	1MF	20%	50V
C2054	1-104-664-11	ELECT	47MF	20%	16V
C2055	1-104-664-11	ELECT	47MF	20%	16V
C2056	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C2057	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2058	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2059	1-104-664-11	ELECT	47MF	20%	16V
C2060	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2061	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2062	1-104-664-11	ELECT	47MF	20%	16V
C2063	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C2064	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2065	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2066	1-104-664-11	ELECT	47MF	20%	16V
C2067	1-104-664-11	ELECT	47MF	20%	16V
C2068	1-104-664-11	ELECT	47MF	20%	16V
C2069	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2070	1-104-664-11	ELECT	47MF	20%	16V
C2071	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C2072	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C2074	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C2075	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C2078	1-104-664-11	ELECT	47MF	20%	16V
C2079	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2080	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2095	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C2096	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C2097	1-163-231-11	CERAMIC CHIP	15PF	5%	50V



BC4

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
		<CONNECTOR>					
CN2001 *	1-793-685-11	PIN, CONNECTOR (PC BOARD) 15P		Q2018	8-729-216-22	TRANSISTOR 2SA1162-G	
				Q2019	8-729-422-33	TRANSISTOR 2SD601A-Q-TX	
		<FERRITE BEAD>				<RESISTOR>	
FB2002	1-414-234-22	INDUCTOR CHIP 0UH		R2011	1-216-041-00	RES,CHIP 470	5% 1/10W
FB2008	1-414-234-22	INDUCTOR CHIP 0UH		R2015	1-216-041-00	RES,CHIP 470	5% 1/10W
FB2009	1-414-234-22	INDUCTOR CHIP 0UH		R2019	1-216-295-91	SHORT 0	
FB2010	1-414-234-22	INDUCTOR CHIP 0UH		R2021	1-216-025-91	RES,CHIP 100	5% 1/10W
FB2011	1-414-234-22	INDUCTOR CHIP 0UH		R2027	1-216-049-91	RES,CHIP 1K	5% 1/10W
FB2012	1-414-234-22	INDUCTOR CHIP 0UH		R2028	1-216-049-91	RES,CHIP 1K	5% 1/10W
FB2014	1-414-234-22	INDUCTOR CHIP 0UH		R2029	1-216-043-91	RES,CHIP 560	5% 1/10W
FB2015	1-414-234-22	INDUCTOR CHIP 0UH		R2030	1-216-043-91	RES,CHIP 560	5% 1/10W
FB2016	1-414-234-22	INDUCTOR CHIP 0UH		R2031	1-216-067-00	RES,CHIP 5.6K	5% 1/10W
FB2017	1-414-234-22	INDUCTOR CHIP 0UH		R2032	1-216-067-00	RES,CHIP 5.6K	5% 1/10W
		<FILTER>		R2033	1-216-057-00	RES,CHIP 2.2K	5% 1/10W
FL2001	1-239-848-11	FILTER, LOW PASS		R2034	1-216-057-00	RES,CHIP 2.2K	5% 1/10W
FL2002	1-239-848-11	FILTER, LOW PASS		R2035	1-216-043-91	RES,CHIP 560	5% 1/10W
FL2003	1-239-848-11	FILTER, LOW PASS		R2036	1-216-649-11	METAL CHIP 820	0.50% 1/10W
FL2004	1-239-848-11	FILTER, LOW PASS		R2037	1-216-044-00	RES,CHIP 620	5% 1/10W
FL2005	1-233-512-21	FERRITE 37UH		R2039	1-216-047-91	RES,CHIP 820	5% 1/10W
FL2006	1-233-512-21	FERRITE 37UH		R2040	1-216-057-00	RES,CHIP 2.2K	5% 1/10W
FL2007	1-233-512-21	FERRITE 37UH		R2041	1-216-047-91	RES,CHIP 820	5% 1/10W
		<IC>		R2042	1-216-075-00	RES,CHIP 12K	5% 1/10W
IC2003	8-759-568-27	IC MSM514265C-60JSDR1		R2043	1-216-085-00	RES,CHIP 33K	5% 1/10W
IC2004	8-759-594-44	IC UPD64082GF-3BA		R2044	1-216-057-00	RES,CHIP 2.2K	5% 1/10W
IC2005	8-759-431-14	IC PQ3TZ53U		R2046	1-216-075-00	RES,CHIP 12K	5% 1/10W
		<COIL>		R2047	1-216-085-00	RES,CHIP 33K	5% 1/10W
L2001	1-410-200-31	INDUCTOR CHIP 4.7UH		R2048	1-216-049-91	RES,CHIP 1K	5% 1/10W
L2004	1-412-058-11	INDUCTOR CHIP 10UH		R2049	1-216-065-91	RES,CHIP 4.7K	5% 1/10W
L2005	1-412-058-11	INDUCTOR CHIP 10UH		R2050	1-216-017-91	RES,CHIP 47	5% 1/10W
L2006	1-412-058-11	INDUCTOR CHIP 10UH		R2051	1-216-049-91	RES,CHIP 1K	5% 1/10W
L2007	1-412-058-11	INDUCTOR CHIP 10UH		R2052	1-216-049-91	RES,CHIP 1K	5% 1/10W
L2008	1-412-058-11	INDUCTOR CHIP 10UH		R2053	1-216-041-00	RES,CHIP 470	5% 1/10W
		<TRANSISTOR>		R2054	1-216-041-00	RES,CHIP 470	5% 1/10W
Q2002	8-729-216-22	TRANSISTOR 2SA1162-G		R2055	1-216-017-91	RES,CHIP 47	5% 1/10W
Q2003	8-729-216-22	TRANSISTOR 2SA1162-G		R2056	1-216-067-00	RES,CHIP 5.6K	5% 1/10W
Q2004	8-729-216-22	TRANSISTOR 2SA1162-G		R2057	1-216-049-91	RES,CHIP 1K	5% 1/10W
Q2005	8-729-422-33	TRANSISTOR 2SD601A-Q-TX		R2058	1-216-057-00	RES,CHIP 2.2K	5% 1/10W
Q2006	8-729-422-33	TRANSISTOR 2SD601A-Q-TX		R2059	1-216-049-91	RES,CHIP 1K	5% 1/10W
Q2007	8-729-422-33	TRANSISTOR 2SD601A-Q-TX		R2060	1-216-025-91	RES,CHIP 100	5% 1/10W
Q2008	8-729-422-33	TRANSISTOR 2SD601A-Q-TX		R2061	1-216-043-91	RES,CHIP 560	5% 1/10W
Q2009	8-729-422-33	TRANSISTOR 2SD601A-Q-TX		R2062	1-216-105-91	RES,CHIP 220K	5% 1/10W
Q2010	8-729-422-33	TRANSISTOR 2SD601A-Q-TX		R2063	1-216-089-91	RES,CHIP 47K	5% 1/10W
Q2011	8-729-422-33	TRANSISTOR 2SD601A-Q-TX		R2064	1-216-049-91	RES,CHIP 1K	5% 1/10W
Q2012	8-729-216-22	TRANSISTOR 2SA1162-G		R2066	1-216-033-00	RES,CHIP 220	5% 1/10W
Q2013	8-729-216-22	TRANSISTOR 2SA1162-G		R2067	1-216-043-91	RES,CHIP 560	5% 1/10W
Q2014	8-729-422-33	TRANSISTOR 2SD601A-Q-TX		R2069	1-216-645-11	METAL CHIP 560	0.50% 1/10W
Q2015	8-729-422-33	TRANSISTOR 2SD601A-Q-TX		R2070	1-216-641-11	METAL CHIP 390	0.50% 1/10W
Q2016	8-729-422-33	TRANSISTOR 2SD601A-Q-TX		R2071	1-216-067-00	RES,CHIP 5.6K	5% 1/10W
				R2072	1-216-043-91	RES,CHIP 560	5% 1/10W
				R2073	1-216-049-91	RES,CHIP 1K	5% 1/10W
				R2074	1-216-025-91	RES,CHIP 100	5% 1/10W
				R2075	1-216-295-91	SHORT 0	
				R2076	1-216-025-91	RES,CHIP 100	5% 1/10W
				R2077	1-216-025-91	RES,CHIP 100	5% 1/10W
				R2078	1-216-295-91	SHORT 0	
				R2092	1-216-055-00	RES,CHIP 1.8K	5% 1/10W

The components identified by shading
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Replace only with part number specified.

BC4 C

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R2093	1-216-055-00	RES,CHIP	1.8K	5%	1/10W	C9028	1-163-017-00 CERAMIC CHIP 0.0047MF 10% 50V
R2104	1-216-295-91	SHORT	0			C9029	1-163-017-00 CERAMIC CHIP 0.0047MF 10% 50V
R2105	1-216-295-91	SHORT	0			C9030	1-163-017-00 CERAMIC CHIP 0.0047MF 10% 50V
R2106	1-216-295-91	SHORT	0			C9031	1-162-114-00 CERAMIC 0.0047MF 2KV
R2107	1-216-295-91	SHORT	0			C9032	1-162-116-00 CERAMIC 680PF 10% 2KV
R2108	1-216-049-91	RES,CHIP	1K	5%	1/10W	C9033	1-107-662-11 ELECT 22MF 20% 250V
R2110	1-216-295-91	SHORT	0			C9035	1-162-114-00 CERAMIC 0.0047MF 2KV
R2112	1-216-295-91	SHORT	0			C9042	1-126-940-11 ELECT 330MF 20% 25V
R2113	1-216-017-91	RES,CHIP	47	5%	1/10W		<CONNECTOR>
R2115	1-216-049-91	RES,CHIP	1K	5%	1/10W	CN9001 *	1-564-512-11 PLUG, CONNECTOR 9P
R2116	1-216-295-91	SHORT	0			CN9002	1-691-765-11 PLUG (MICRO CONNECTOR) 3P
R2117	1-216-295-91	SHORT	0			CN9003	1-695-915-11 TAB (CONTACT)
R2118	1-216-296-91	SHORT	0			CN9004	1-695-915-11 TAB (CONTACT)
R2119	1-216-296-91	SHORT	0			CN9005 *	1-564-506-11 PLUG, CONNECTOR 3P
R2200	1-216-296-91	SHORT	0			CN9007	1-785-879-11 CONNECTOR, ONE TOUCH
		<VARIABLE RESISTOR>					<DIODE>
RV2001	1-223-271-21	RES, ADJ, CERMET 220				D9002	8-719-400-75 DIODE MA3091
		<CRYSTAL>				D9005	8-719-073-01 DIODE MA111-(K8).S0
X2001	1-767-606-11	VIBRATOR, CRYSTAL				D9006	8-719-051-85 DIODE HSS83TD
						D9007	8-719-051-85 DIODE HSS83TD
						D9008	8-719-051-85 DIODE HSS83TD
						D9009	8-719-908-03 DIODE GP08D
						D9010	8-719-110-17 DIODE RD10ESB2
							<IC>
						IC9001	8-759-360-83 IC TDA6111Q/N4
						IC9002	8-759-360-83 IC TDA6111Q/N4
						IC9003	8-759-360-83 IC TDA6111Q/N4
							<JACK>
						J9001 Δ	1-540-071-22 SOCKET, CRT
							<COIL>
						L9001	1-414-158-11 INDUCTOR 2.2UH
						L9002	1-408-591-11 INDUCTOR 1UH
						L9003	1-408-591-11 INDUCTOR 1UH
						L9004	1-408-591-11 INDUCTOR 1UH
						L9005	1-406-666-21 INDUCTOR 150UH
						L9006	1-412-526-11 INDUCTOR 12UH
							<NEON LAMP>
						NL9001	1-519-526-11 LAMP, NEON
							<TRANSISTOR>
						Q9001	8-729-026-49 TRANSISTOR 2SA1037AK-T146-R
						Q9009	8-729-026-49 TRANSISTOR 2SA1037AK-T146-R
						Q9010	8-729-026-49 TRANSISTOR 2SA1037AK-T146-R
						Q9011	8-729-026-49 TRANSISTOR 2SA1037AK-T146-R

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REF. NO.	PART NO.	DESCRIPTION	REMARK		
<RESISTOR>					
R9001	1-216-059-00	RES,CHIP	2.7K	5%	1/10W
R9006	1-216-073-00	RES,CHIP	10K	5%	1/10W
R9007	1-208-789-11	METAL CHIP	2K	0.50%	1/10W
R9008	1-216-085-00	RES,CHIP	33K	5%	1/10W
R9012	1-216-049-91	RES,CHIP	1K	5%	1/10W
R9013	1-216-049-91	RES,CHIP	1K	5%	1/10W
R9018	1-216-059-00	RES,CHIP	2.7K	5%	1/10W
R9019	1-216-059-00	RES,CHIP	2.7K	5%	1/10W
R9021	1-216-295-91	SHORT	0		
R9023	1-216-295-91	SHORT	0		
R9026	1-208-789-11	METAL CHIP	2K	0.50%	1/10W
R9031	1-208-789-11	METAL CHIP	2K	0.50%	1/10W
R9033	1-208-808-11	METAL CHIP	12K	0.50%	1/10W
R9034	1-208-800-11	METAL CHIP	5.6K	0.50%	1/10W
R9035	1-208-790-11	METAL CHIP	2.2K	0.50%	1/10W
R9036	1-216-049-91	RES,CHIP	1K	5%	1/10W
R9037	1-240-233-71	METAL OXIDE	100	5%	3W
R9038	1-208-790-11	METAL CHIP	2.2K	0.50%	1/10W
R9039	1-208-790-11	METAL CHIP	2.2K	0.50%	1/10W
R9041	1-216-049-91	RES,CHIP	1K	5%	1/10W
R9042	1-216-049-91	RES,CHIP	1K	5%	1/10W
R9043	1-240-233-71	METAL OXIDE	100	5%	3W
R9044	1-240-233-71	METAL OXIDE	100	5%	3W
R9047	1-202-557-00	SOLID	220	20%	1/2W
R9048	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R9049	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R9050	1-249-424-11	CARBON	3.9K	5%	1/4W
R9051	1-202-557-00	SOLID	220	20%	1/2W
R9052	1-202-557-00	SOLID	220	20%	1/2W
R9053	1-249-424-11	CARBON	3.9K	5%	1/4W
R9054	1-249-424-11	CARBON	3.9K	5%	1/4W
R9055	1-202-884-11	SOLID	820K	20%	1/2W
R9056	1-202-813-00	SOLID	22K	10%	1/2W
R9057	1-202-847-00	SOLID	560K	20%	1/2W
R9058	1-202-884-11	SOLID	820K	20%	1/2W
R9059	1-202-818-00	SOLID	1K	20%	1/2W
R9061	1-202-549-00	SOLID	100	20%	1/2W
R9065	1-216-069-00	RES,CHIP	6.8K	5%	1/10W
R9068	1-216-101-00	RES,CHIP	150K	5%	1/10W
R9069	1-202-549-00	SOLID	100	20%	1/2W
R9070	1-216-037-00	RES,CHIP	330	5%	1/10W
R9071	1-216-037-00	RES,CHIP	330	5%	1/10W
R9072	1-216-037-00	RES,CHIP	330	5%	1/10W
R9073	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
<VARIABLE RESISTOR>					
RV9001	1-241-714-11	RES, ADJ, METAL FILM 110M			
RV9002	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M			

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REF. NO.	PART NO.	DESCRIPTION	REMARK		
* A-1346-902-A		D BOARD COMPLETE			
*****					
* 4-363-146-00		HEAT SINK, V.OUT			
4-382-854-11		SCREW (M3X10), P, SW (+)			
4-382-854-21		SCREW (M3X14), P, SW (+)			
<CAPACITOR>					
C6601	1-104-665-11	ELECT	100MF	20%	25V
C6602	1-129-720-00	FILM	0.033MF	5%	630V
C6604	1-126-967-11	ELECT	47MF	20%	50V
C6606	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C6607 Δ	1-113-887-51	CERAMIC	470PF	10%	250V
C6608 Δ	1-119-892-51	CERAMIC	470PF	10%	250V
C6609	1-136-177-00	MYLAR	1MF	5%	50V
C6610	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C6611	1-163-275-11	CERAMIC CHIP	0.001MF	5%	50V
C6612	1-126-964-11	ELECT	10MF	20%	50V
C6613	1-161-830-00	CERAMIC	0.0047MF	99%	500V
C6614	1-161-830-00	CERAMIC	0.0047MF		500V
C6615	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C6616	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C6617	1-161-830-00	CERAMIC	0.0047MF		500V
C6618	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C6619	1-161-830-00	CERAMIC	0.0047MF	99%	500V
C6620	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C6621	1-131-940-11	ELECT	1200MF	20%	250V
C6622	1-131-940-11	ELECT	1200MF	20%	250V
C6624	1-126-933-11	ELECT	100MF	20%	16V
C6625	1-129-718-00	FILM	0.022MF	5%	630V
C6626	1-130-029-00	FILM	8200PF	2%	50V
C6627	1-102-129-00	CERAMIC	0.01MF	10%	50V
C6628	1-104-330-91	CERAMIC	470PF	10%	1KV
C6630	1-107-680-91	ELECT	22MF	20%	450V
C6631	1-126-964-11	ELECT	10MF	20%	50V
C6632	1-126-963-11	ELECT	4.7MF	20%	50V
C6633	1-126-967-11	ELECT	47MF	20%	50V
C6634	1-126-968-11	ELECT	100MF	20%	50V
C6635	1-102-973-00	CERAMIC	100PF	5%	50V
C6637	1-109-879-11	CERAMIC	22PF	5%	2KV
C6638	1-126-964-11	ELECT	10MF	20%	50V
C6639	1-163-275-11	CERAMIC CHIP	0.001MF	5%	50V
C6640	1-104-330-91	CERAMIC	470PF	10%	1KV
C6641	1-104-341-11	MYLAR	0.1MF	10%	250V
C6642	1-126-964-11	ELECT	10MF	20%	50V
C6643	1-163-275-11	CERAMIC CHIP	0.001MF	5%	50V
C6648	1-126-941-11	ELECT	470MF	20%	25V
C6649	1-104-665-11	ELECT	100MF	20%	25V
C6650	1-162-115-00	CERAMIC	330PF	10%	1KV
C6651	1-162-115-00	CERAMIC	330PF	10%	1KV
C6652	1-110-626-11	ELECT	330MF	20%	160V
C6653	1-137-368-11	MYLAR	0.0047MF	5%	50V
C6654	1-126-936-11	ELECT	3300MF	20%	16V
C6655	1-126-942-61	ELECT	1000MF	20%	25V
C6656	1-136-165-00	MYLAR	0.1MF	5%	50V
C6658	1-126-944-11	ELECT	3300MF	20%	25V
C6659	1-126-944-11	ELECT	3300MF	20%	25V
C6660	1-126-960-11	ELECT	1MF	20%	50V

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REF. NO.	PART NO.	DESCRIPTION	REMARK		
C6661	1-104-664-11	ELECT	47MF	20%	16V
C6662	1-104-664-11	ELECT	47MF	20%	16V
C6663	1-102-129-00	CERAMIC	0.01MF	10%	50V
C6664	1-102-129-00	CERAMIC	0.01MF	10%	50V
C6665	1-126-964-11	ELECT	10MF	20%	50V
C6666	1-137-370-11	MYLAR	0.01MF	5%	50V
C6668	1-104-664-11	ELECT	47MF	20%	25V
C6669	1-162-115-00	CERAMIC	330PF	10%	1KV
C6670	1-162-115-00	CERAMIC	330PF	10%	1KV
C6671	1-129-718-00	FILM	0.022MF	5%	630V
C6672	1-104-331-11	CERAMIC	0.0022MF	10%	1KV
C6673	1-104-331-11	CERAMIC	0.0022MF	10%	1KV
C6674	1-128-527-11	ELECT	330MF	20%	25V
C6677	1-163-037-11	CERAMIC CHIP	0.022MF	10%	50V
C6679	1-107-823-11	CERAMIC CHIP	470000PF	10%	16V
C6800	1-126-964-11	ELECT	10MF	20%	50V
C6801	1-126-960-11	ELECT	1MF	20%	50V
C6802	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C6803	1-102-129-00	CERAMIC	0.01MF	10%	50V
C6804	1-102-129-00	CERAMIC	0.01MF	10%	50V
C6805	1-111-087-11	ELECT	330MF	20%	25V
C6806	1-107-933-11	ELECT	100MF	20%	100V
C6808	1-106-228-00	MYLAR	0.22MF	10%	100V
C6809	1-102-074-00	CERAMIC	0.001MF	10%	50V
C6810	1-106-220-00	MYLAR	0.1MF	10%	100V
C6811	1-111-087-11	ELECT	330MF	20%	25V
C6812	1-130-785-11	MYLAR	0.47MF	10%	100V
C6813	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C6814	1-115-565-11	CERAMIC CHIP	2.2MF	10%	10V
C6815	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C6816	1-136-207-11	MYLAR	0.047MF	5%	400V
C6817	1-126-967-11	ELECT	47MF	20%	50V
C6818	1-126-960-11	ELECT	1MF	20%	50V
C6819	1-126-960-11	ELECT	1MF	20%	50V
C6820	1-102-114-00	CERAMIC	470PF	10%	50V
C6821	1-106-383-00	MYLAR	0.047MF	10%	200V
C6822	1-102-114-00	CERAMIC	470PF	10%	50V
C6823	1-106-383-00	MYLAR	0.047MF	10%	200V
C6826	1-102-030-00	CERAMIC	330PF	10%	500V
C6827	1-102-030-00	CERAMIC	330PF	10%	500V
C6828	1-107-364-11	MYLAR	0.01MF	10%	200V
C6829	1-162-115-00	CERAMIC	330PF	10%	2KV
C6830	1-117-619-11	FILM	1000PF	3%	1.2KV
C6831	1-117-838-21	FILM	8200PF	3%	1.5KV
C6832	1-117-842-21	FILM	12000PF	3%	1.5KV
C6833	1-136-287-11	FILM	0.0047MF	5%	100V
C6834	1-125-893-11	FILM	680PF	3%	1.5KV
C6835	1-125-893-11	FILM	680PF	3%	1.5KV
C6836	1-137-150-11	FILM	0.01MF	5%	100V
C6837	1-125-893-11	FILM	680PF	3%	1.5KV
C6838	1-125-893-11	FILM	680PF	3%	1.5KV
C6839	1-126-933-11	ELECT	100MF	20%	16V
C6840	1-126-933-11	ELECT	100MF	20%	16V
C6841	1-117-660-81	FILM	0.12MF	5%	250V
C6842	1-117-673-11	FILM	1.5MF	5%	250V
C6843	1-115-339-11	CERAMIC CHIP	0.1MF	10%	50V
C6844	1-115-339-11	CERAMIC CHIP	0.1MF	10%	50V
C6845	1-117-664-11	FILM	0.27MF	5%	250V

REF. NO.	PART NO.	DESCRIPTION	REMARK		
C6846	1-115-514-11	FILM	0.22MF	5%	250V
C6847	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C6848	1-113-979-51	FILM	0.047MF	5%	250V
C6849	1-115-339-11	CERAMIC CHIP	0.1MF	10%	50V
C6850	1-115-339-11	CERAMIC CHIP	0.1MF	10%	50V
C6851	1-107-639-11	ELECT	47MF	20%	160V
C6853	1-102-228-00	CERAMIC	470PF	10%	500V
C6854	1-126-941-11	ELECT	470MF	20%	25V
C6855	1-123-024-21	ELECT	33MF		160V
C6856	1-126-971-11	ELECT	470MF	20%	50V
C6857	1-102-228-00	CERAMIC	470PF	10%	500V
C6858	1-102-228-00	CERAMIC	470PF	10%	500V
C6859	1-162-129-00	CERAMIC	150PF	10%	2KV
C6860	1-162-129-00	CERAMIC	150PF	10%	2KV
C6862	1-130-202-00	FILM	0.022MF	5%	200V
C6863	1-107-906-11	ELECT	10MF	20%	50V
C6864	1-129-898-00	FILM	0.0022MF	5%	630V
C6865	1-130-202-00	FILM	0.022MF	5%	400V
C6866	1-102-030-00	CERAMIC	330PF	10%	500V
C6867	1-130-785-11	MYLAR	0.47MF	10%	100V
C6868	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C6869	1-128-526-11	ELECT	100MF	20%	16V
C6870	1-128-528-11	ELECT	470MF	20%	25V
C6871	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C6872	1-163-275-11	CERAMIC CHIP	0.001MF	5%	50V
C6874	1-136-165-00	MYLAR	0.1MF	5%	50V
C6875	1-104-664-11	ELECT	47MF	20%	16V
C6876	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C6877	1-126-964-11	ELECT	10MF	20%	50V
C6878	1-126-320-11	ELECT	10MF	20%	16V
C6879	1-107-960-11	ELECT	4.7MF	20%	160V
C6882	1-104-574-11	CERAMIC	0.0047MF	10%	2KV
C6883	1-126-964-11	ELECT	10MF	20%	50V
C6884	1-115-565-11	CERAMIC CHIP	2.2MF	10%	10V
<CONNECTOR>					
CN6602*	$\Delta$ 1-508-768-12	PIN, CONNECTOR (5MM PITCH) 2P			
CN6603*	$\Delta$ 1-573-963-11	PIN, CONNECTOR (PC BOARD) 3P			
CN6604*	$\Delta$ 1-580-843-11	PIN, CONNECTOR (PC BOARD) 5P			
CN6605*	1-564-513-11	PLUG, CONNECTOR 10P			
CN6606*	1-564-510-11	PLUG, CONNECTOR 7P			
CN6608*	1-564-506-11	PLUG, CONNECTOR 3P			
CN6609*	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P			
CN6610*	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P			
CN6611*	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P			
CN6612*	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P			
CN6613*	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P			
CN6614*	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P			
CN6615*	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P			
CN6616*	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P			
CN6618*	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P			

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
CN6800	1-785-802-11	PIN, CONNECTOR (WITH PWB) 20P		D6801	8-719-911-19	DIODE 1SS119-25	
CN6801*	$\triangle$ 1-785-270-12	PIN, DY CONNECTOR (PC BOARD)		D6803	8-719-510-73	DIODE S3L20UF4	
CN6802	1-793-495-11	CONNECTOR, BOARD TO BOARD 50P		D6805	8-719-110-39	DIODE RD15ESB1	
CN6804	1-691-765-11	PLUG (MICRO CONNECTOR) 3P		D6806	8-719-911-19	DIODE 1SS119-25	
CN6808	1-695-915-11	TAB (CONTACT)		D6807	8-719-109-68	DIODE RD3.6ESB1	
CN6810	1-785-879-11	CONNECTOR, ONE TOUCH		D6808	8-719-914-43	DIODE DAN202K	
CN6811*	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P		D6809	8-719-908-03	DIODE GP08D	
CN6812*	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P		D6812	8-719-110-39	DIODE RD15ESB1	
		<DIODE>		D6813	8-719-302-43	DIODE EL1Z	
D6601	8-719-911-19	DIODE 1SS119-25		D6814	8-719-018-82	DIODE RGP02-20EL-6394	
D6602	8-719-073-01	DIODE MA111-(K8).S0		D6816	8-719-510-73	DIODE S3L20UF4	
D6603	8-719-073-01	DIODE MA111-(K8).S0		D6817	8-719-510-73	DIODE S3L20UF4	
D6604	8-719-073-01	DIODE MA111-(K8).S0		D6820	8-719-970-87	DIODE ERA38-06	
D6605	8-719-510-53	DIODE D4SB60L		D6821	8-719-970-87	DIODE ERA38-06	
D6606	8-719-073-01	DIODE MA111-(K8).S0		D6822	8-719-067-18	DIODE RN4Z	
D6607	8-719-073-01	DIODE MA111-(K8).S0		D6823	8-719-911-19	DIODE 1SS119-25	
D6608	8-719-073-01	DIODE MA111-(K8).S0		D6824	8-719-510-73	DIODE S3L20UF4	
D6609	8-719-911-19	DIODE 1SS119-25		D6825	8-719-914-43	DIODE DAN202K	
D6610	8-719-073-01	DIODE MA111-(K8).S0		D6826	8-719-911-19	DIODE 1SS119-25	
D6611	8-719-073-01	DIODE MA111-(K8).S0				<FERRITE BEAD>	
D6611	8-719-988-61	DIODE 1SS355TE-17		FB6602	1-239-358-21	FILTER, NOISE	
D6612	8-719-911-55	DIODE U05G		FB6603	1-239-358-21	FILTER, NOISE	
D6613	8-719-911-55	DIODE U05G				<IC>	
D6614	8-719-110-30	DIODE RD12ESB1		IC6601	8-759-198-31	IC UPC1093J-1-T	
D6615	8-719-911-19	DIODE 1SS119-25		IC6602	8-759-103-93	IC UPC393C	
D6616	8-719-911-55	DIODE U05G		IC6603	8-749-016-66	IC MCR5152	
D6617	8-719-911-55	DIODE U05G		IC6604	8-759-468-89	IC TOP209P	
D6618	8-719-073-01	DIODE MA111-(K8).S0		IC6606	8-759-450-47	IC BA05T	
D6619	8-719-110-30	DIODE RD12ESB1		IC6607	8-749-012-13	IC DM-58	
D6621	8-719-075-73	DIODE 10ELS2N-TB5		IC6608	8-759-103-93	IC UPC393C	
D6622	8-719-979-64	DIODE UF4005PKG23		IC6800	8-759-192-71	IC STV9379	
D6623	8-719-059-23	DIODE P6KE200AG23		IC6801	8-759-450-95	IC LM393N	
D6624	8-719-077-66	DIODE 11EQSO3LN-TA1B2		IC6804	8-759-394-36	IC BA09T	
D6625	8-719-110-36	DIODE RD13ESB2		IC6805	8-759-394-35	IC BA12T	
D6626	8-719-979-64	DIODE UF4005PKG23		IC6806	8-749-013-76	IC PQ6RD83B	
D6628	8-719-075-73	DIODE 10ELS2N-TB5				<CHIP CONDUCTOR>	
D6631	8-719-050-18	DIODE D4SBL20U		JR6601	1-216-295-91	SHORT	0
D6632	8-719-073-01	DIODE MA111-(K8).S0		JR6603	1-216-295-91	SHORT	0
D6633	8-719-510-12	DIODE D10SC4M		JR6604	1-216-296-91	SHORT	0
D6634	8-719-060-88	DIODE D4SBS6		JR6605	1-216-296-91	SHORT	0
D6635	8-719-110-47	DIODE RD18ESB		JR6606	1-216-296-91	SHORT	0
D6636	8-719-911-19	DIODE 1SS119-25		JR6607	1-216-295-91	SHORT	0
D6639	8-719-075-73	DIODE 10ELS2N-TB5		JR6608	1-216-296-91	SHORT	0
D6640	8-719-110-72	DIODE RD30ESB2		JR6609	1-216-295-91	SHORT	0
D6641	8-719-109-96	DIODE RD6.8ESB1		JR6610	1-216-296-91	SHORT	0
D6642	8-719-911-19	DIODE 1SS119-25		JR6611	1-216-295-91	SHORT	0
D6643	8-719-979-64	DIODE UF4005PKG23		JR6802	1-216-296-91	SHORT	0
D6644	8-719-052-92	DIODE D10SBS4F		JR6803	1-216-295-91	SHORT	0
D6648	8-719-110-30	DIODE RD12ESB1		JR6810	1-216-295-91	SHORT	0
D6649	8-719-073-01	DIODE MA111-(K8).S0					
D6650	8-719-911-19	DIODE 1SS119-25					
D6651	8-719-977-95	DIODE DTZ-TT11-2.4B					
D6652	8-719-110-47	DIODE RD18ESB					
D6800	8-719-110-03	DIODE RD7.5ESB2					

D

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
		<COIL>					
L6601	1-412-525-31	INDUCTOR 10UH		Q6805	8-729-140-96	TRANSISTOR 2SD774-34	
L6602	1-410-397-21	FERRITE 1.1UH		Q6806	8-729-140-96	TRANSISTOR 2SD774-34	
L6603	1-410-397-21	FERRITE 1.1UH		Q6807	8-729-046-18	TRANSISTOR 2SC5480-01	
L6604	1-412-525-31	INDUCTOR 10UH		Q6808	8-729-046-18	TRANSISTOR 2SC5480-01	
L6605	1-412-525-31	INDUCTOR 10UH		Q6809	8-729-038-83	TRANSISTOR 2SK2251-01-F19	
L6606	1-412-525-31	INDUCTOR 10UH		Q6810	8-729-047-60	TRANSISTOR IRFI830G-LF49	
L6607	1-412-519-11	INDUCTOR 3.3UH		Q6811	1-801-806-11	TRANSISTOR DTC144EKA-T146	
L6800	1-412-525-31	INDUCTOR 10UH		Q6812	8-729-043-95	TRANSISTOR 2SC3840(3)	
L6801	1-406-675-11	INDUCTOR 4.7MMH		Q6813	8-729-422-33	TRANSISTOR 2SD601A-Q-TX	
L6802	1-416-775-21	INDUCTOR 1MMH		Q6814	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
L6803	1-406-982-11	INDUCTOR 680UH		Q6815	8-729-045-65	TRANSISTOR 2SA1776TV2Q	
L6804	1-412-519-11	INDUCTOR 3.3UH		Q6816	8-729-140-96	TRANSISTOR 2SD774-34	
L6805	1-412-519-11	INDUCTOR 3.3UH		Q6817	8-729-422-33	TRANSISTOR 2SD601A-Q-TX	
L6806	1-412-519-11	INDUCTOR 3.3UH		Q6818	1-801-806-11	TRANSISTOR DTC144EKA-T146	
L6807	1-412-552-11	INDUCTOR 2.2MMH		Q6819	1-801-806-11	TRANSISTOR DTC144EKA-T146	
L6808	1-406-674-11	INDUCTOR 3.3MMH		Q6820	8-729-422-33	TRANSISTOR 2SD601A-Q-TX	
		<NEON LAMP>		Q6821	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
NL6601	1-576-429-11	GAP, SPARK		Q6822	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
		<PHOTO COUPLER>		Q6823	8-729-422-33	TRANSISTOR 2SD601A-Q-TX	
PH6601	8-749-010-64	PHOTO COUPLER PC123F2				<RESISTOR>	
PH6601	8-749-924-35	PHOTO COUPLER ON3171-R		R6500	1-220-797-11	CEMENTED 0.47 5% 10W F	
PH6602	8-749-010-64	PHOTO COUPLER PC123F2		R6600	1-216-295-91	SHORT 0	
PH6602	8-749-924-35	PHOTO COUPLER ON3171-R		R6602	1-247-831-91	CARBON 1K 5% 1/4W	
		<IC LINK>		R6603	1-208-806-11	METAL CHIP 10K 0.50% 1/10W	
PS6605	1-533-597-41	LINK, IC		R6604	1-208-806-11	METAL CHIP 10K 0.50% 1/10W	
PS6606	1-533-597-41	LINK, IC		R6605	1-215-471-00	METAL 120K 1% 1/4W	
PS6607	1-533-597-41	LINK, IC		R6606	1-215-466-00	METAL 75K 1% 1/4W	
PS6801	1-532-841-21	LINK, IC		R6607	1-215-489-00	METAL 680K 1% 1/4W	
		<TRANSISTOR>		R6608	1-215-489-00	METAL 680K 1% 1/4W	
Q6601	8-729-119-78	TRANSISTOR 2SC2785-HFE		R6609	1-215-489-00	METAL 680K 1% 1/4W	
Q6602	8-729-119-78	TRANSISTOR 2SC2785-HFE		R6610	1-208-830-11	METAL CHIP 100K 0.50% 1/10W	
Q6603	8-729-119-76	TRANSISTOR 2SA1175-HFE		R6611	1-208-798-11	METAL CHIP 4.7K 0.50% 1/10W	
Q6604	8-729-119-76	TRANSISTOR 2SA1175-HFE		R6612	1-215-471-00	METAL 120K 1% 1/4W	
Q6605	8-729-230-49	TRANSISTOR 2SC2712-YG		R6613	1-215-489-00	METAL 680K 1% 1/4W	
Q6606	8-729-140-93	TRANSISTOR 2SB733-34		R6614	1-215-489-00	METAL 680K 1% 1/4W	
Q6608	8-729-200-21	TRANSISTOR 2SC2500-B		R6615	1-215-489-00	METAL 680K 1% 1/4W	
Q6609	8-729-029-56	TRANSISTOR DTA144ESA		R6616	1-208-830-11	METAL CHIP 100K 0.50% 1/10W	
Q6610	8-729-119-78	TRANSISTOR 2SC2785-HFE		R6617	1-208-844-11	METAL CHIP 390K 0.50% 1/10W	
Q6611	8-729-029-66	TRANSISTOR DTC114ESA		R6618	1-215-466-00	METAL 75K 1% 1/4W	
Q6612	8-729-029-66	TRANSISTOR DTC114ESA		R6619	1-216-113-00	RES,CHIP 470K 5% 1/10W	
Q6613	8-729-030-02	TRANSISTOR DTC144ESA		R6620	1-208-846-11	METAL CHIP 470K 0.50% 1/10W	
Q6614	8-729-119-76	TRANSISTOR 2SA1175-HFE		R6621	1-216-073-00	RES,CHIP 10K 5% 1/10W	
Q6615	8-729-900-53	TRANSISTOR DTC114EK		R6622	1-220-797-11	CEMENTED 0.47 5% 10W F	
Q6616	8-729-029-66	TRANSISTOR DTC114ESA		R6623	1-215-457-00	METAL 33K 1% 1/4W	
Q6800	8-729-422-33	TRANSISTOR 2SD601A-Q-TX		R6624	1-208-830-11	METAL CHIP 100K 0.50% 1/10W	
Q6801	8-729-039-68	TRANSISTOR IRF620		R6625	1-208-826-11	METAL CHIP 68K 0.50% 1/10W	
Q6802	8-729-046-33	TRANSISTOR IRF720-LF49		R6626	1-208-830-11	METAL CHIP 100K 0.50% 1/10W	
Q6803	8-729-119-76	TRANSISTOR 2SA1175-HFE		R6627	1-208-834-11	METAL CHIP 150K 0.50% 1/10W	
Q6804	8-729-119-78	TRANSISTOR 2SC2785-HFE		R6628	1-216-073-00	RES,CHIP 10K 5% 1/10W	
				R6629	1-215-466-00	METAL 75K 1% 1/4W	
				R6630	1-215-489-00	METAL 680K 1% 1/4W	
				R6631	1-215-489-00	METAL 680K 1% 1/4W	
				R6632	1-215-489-00	METAL 680K 1% 1/4W	
				R6633	1-215-458-00	METAL 36K 1% 1/4W	
				R6634	1-215-489-00	METAL 680K 1% 1/4W	

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D

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R6635	1-215-489-00	METAL	680K 1% 1/4W	R6703	1-216-091-00	RES,CHIP	56K 5% 1/10W
R6636	1-215-489-00	METAL	680K 1% 1/4W	R6704	1-249-377-11	CARBON	0.47 5% 1/4W
R6637	1-215-463-00	METAL	56K 1% 1/4W	R6707	1-249-421-11	CARBON	2.2K 5% 1/4W
R6638	1-240-876-11	CEMENTED	1 5% 15W	R6710	1-217-158-00	METAL	0.47 10% 5W
R6639	1-240-876-11	CEMENTED	1 5% 15W	R6711	1-215-471-00	METAL	120K 1% 1/4W
R6640	1-216-081-00	RES,CHIP	22K 5% 1/10W	R6712	1-215-451-00	METAL	18K 1% 1/4W
R6641	1-260-131-11	CARBON	470K 5% 1/2W	R6713	1-249-423-91	CARBON	3.3K 5% 1/4W
R6642	1-260-131-11	CARBON	470K 5% 1/2W	R6800	1-249-429-11	CARBON	10K 5% 1/4W
R6643	1-216-081-00	RES,CHIP	22K 5% 1/10W	R6801	1-249-429-11	CARBON	10K 5% 1/4W
R6644	1-216-065-91	RES,CHIP	4.7K 5% 1/10W	R6802	1-249-429-11	CARBON	10K 5% 1/4W
R6645	1-202-933-61	FUSIBLE	0.1 10% 1/2W	R6803	1-216-073-00	RES,CHIP	10K 5% 1/10W
R6646	1-216-073-00	RES,CHIP	10K 5% 1/10W	R6804	1-208-795-11	METAL CHIP	3.6K 0.50% 1/10W
R6647	1-215-864-00	METAL OXIDE	150 5% 1W	R6805	1-215-441-00	METAL	6.8K 1% 1/4W
R6648	1-215-481-00	METAL	330K 1% 1/4W	R6806	1-215-434-00	METAL	3.6K 1% 1/4W
R6649	1-216-065-91	RES,CHIP	4.7K 5% 1/10W	R6807	1-249-383-11	CARBON	1.5 5% 1/4W
R6650	1-215-481-00	METAL	330K 1% 1/4W	R6810	1-214-798-21	METAL	1.8 1% 1/2W
R6651	1-215-430-00	METAL	2.4K 1% 1/4W	R6811	1-215-913-11	METAL OXIDE	220 5% 3W
R6652	1-215-450-00	METAL	16K 1% 1/4W	R6812	1-247-843-11	CARBON	3.3K 5% 1/4W
R6653	1-219-776-11	CARBON	2.2M 10% 1/2W	R6813	1-214-798-21	METAL	1.8 1% 1/2W
R6654	1-216-089-91	RES,CHIP	47K 5% 1/10W	R6814	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R6655	1-216-073-00	RES,CHIP	10K 5% 1/10W	R6815	1-208-801-11	METAL CHIP	6.2K 0.50% 1/10W
R6656	1-215-481-00	METAL	330K 1% 1/4W	R6816	1-214-915-00	METAL	120K 1% 1/2W
R6657	1-247-791-91	CARBON	22 5% 1/4W	R6818	1-215-485-00	METAL	470K 1% 1/4W
R6658	1-216-073-00	RES,CHIP	10K 5% 1/10W	R6819	1-249-421-11	CARBON	2.2K 5% 1/4W
R6659	1-216-073-00	RES,CHIP	10K 5% 1/10W	R6820	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R6660	1-249-389-11	CARBON	4.7 5% 1/4W	R6822	1-216-461-00	METAL OXIDE	5.6K 5% 2W
R6661	1-215-421-00	METAL	1K 1% 1/4W	R6823	1-215-895-11	METAL OXIDE	3.3K 5% 2W
R6662	1-216-381-11	METAL OXIDE	0.22 5% 3W	R6824	1-249-411-11	CARBON	330 5% 1/4W
R6663	1-216-381-11	METAL OXIDE	0.22 5% 3W	R6825	1-249-411-11	CARBON	330 5% 1/4W
R6665	1-219-776-11	CARBON	2.2M 10% 1/2W	R6826	1-215-894-11	METAL OXIDE	2.2K 5% 2W
R6666	1-208-782-11	METAL CHIP	1K 0.50% 1/10W	R6827	1-216-459-00	METAL OXIDE	2.7K 5% 2W
R6667	1-249-413-11	CARBON	470 5% 1/4W	R6828	1-247-831-91	CARBON	1K 5% 1/4W
R6668	1-216-017-91	RES,CHIP	47 5% 1/10W	R6829	1-247-831-91	CARBON	1K 5% 1/4W
R6669	1-247-831-91	CARBON	1K 5% 1/4W	R6830	1-247-764-11	CARBON	10K 5% 1/2W
R6672	1-249-421-11	CARBON	2.2K 5% 1/4W	R6831	1-247-764-11	CARBON	10K 5% 1/2W
R6674	1-247-815-91	CARBON	220 5% 1/4W	R6832	1-215-477-00	METAL	220K 1% 1/4W
R6679	1-249-437-11	CARBON	47K 5% 1/4W	R6833	1-215-493-00	METAL	1M 1% 1/4W
R6680	1-216-362-11	METAL OXIDE	0.27 5% 2W	R6834	1-216-381-11	METAL OXIDE	0.22 5% 3W
R6681	1-249-429-11	CARBON	10K 5% 1/4W	R6835	1-216-381-11	METAL OXIDE	0.22 5% 3W
R6682	1-249-416-11	CARBON	820 5% 1/4W	R6836	1-215-905-11	METAL OXIDE	10 5% 3W
R6683	1-260-127-11	CARBON	220K 5% 1/2W	R6837	1-215-905-11	METAL OXIDE	10 5% 3W
R6685	1-249-421-11	CARBON	2.2K 5% 1/4W	R6838	1-215-461-00	METAL	47K 1% 1/4W
R6686 $\triangle$	1-218-265-11	METAL	8.2M 5% 1W	R6839	1-249-405-11	CARBON	100 5% 1/4W
R6688	1-249-417-11	CARBON	1K 5% 1/4W	R6841	1-216-434-11	METAL OXIDE	1.8K 5% 1W
R6689	1-249-389-11	CARBON	4.7 5% 1/4W	R6842	1-215-923-00	METAL OXIDE	10K 5% 3W
R6690	1-249-429-11	CARBON	10K 5% 1/4W	R6843	1-216-073-00	RES,CHIP	10K 5% 1/10W
R6691	1-260-131-11	CARBON	470K 5% 1/2W	R6844	1-247-807-31	CARBON	100 5% 1/4W
R6692	1-249-410-11	CARBON	270 5% 1/4W	R6845	1-208-824-11	METAL CHIP	56K 0.50% 1/10W
R6693	1-215-451-00	METAL	18K 1% 1/4W	R6846	1-260-127-11	CARBON	220K 5% 1/2W
R6694	1-215-471-00	METAL	120K 1% 1/4W	R6847	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R6696	1-215-925-11	METAL OXIDE	22K 5% 3W	R6848	1-216-101-00	RES,CHIP	150K 5% 1/10W
R6697	1-249-429-11	CARBON	10K 5% 1/4W	R6849	1-249-443-11	CARBON	0.47 5% 1/4W
R6698	1-247-831-91	CARBON	1K 5% 1/4W	R6850	1-249-443-11	CARBON	0.47 5% 1/4W
R6701	1-216-073-00	RES,CHIP	10K 5% 1/10W	R6851	1-260-288-11	CARBON	0.47 5% 1/2W
R6702	1-216-093-91	RES,CHIP	68K 5% 1/10W	R6852	1-216-345-11	METAL OXIDE	0.47 5% 1W

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**D** **D1**

REF. NO.	PART NO.	DESCRIPTION	REMARK
R6853	1-260-288-11	CARBON	0.47 5% 1/2W
R6854	1-215-923-00	METAL OXIDE	10K 5% 3W
R6855	1-214-898-81	METAL	24K 1% 1/2W
R6856	1-215-923-00	METAL OXIDE	10K 5% 3W
R6857	1-215-923-00	METAL OXIDE	10K 5% 3W
R6858	1-214-898-81	METAL	24K 1% 1/2W
R6859	1-215-871-11	METAL OXIDE	2.2K 5% 1W
R6860	1-215-923-00	METAL OXIDE	10K 5% 3W
R6861	1-216-295-91	SHORT	0
R6862	1-216-081-00	RES,CHIP	22K 5% 1/10W
R6863	1-215-894-11	METAL OXIDE	2.2K 5% 2W
R6864	1-216-081-00	RES,CHIP	22K 5% 1/10W
R6865	1-216-101-00	RES,CHIP	150K 5% 1/10W
R6866	1-215-431-00	METAL	2.7K 1% 1/4W
R6867	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R6868	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R6869	1-216-113-00	RES,CHIP	470K 5% 1/10W
R6870	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R6871	1-208-822-11	METAL CHIP	47K 0.50% 1/10W
R6872	1-260-125-11	CARBON	150K 5% 1/2W
R6873	1-260-125-11	CARBON	150K 5% 1/2W
R6875	1-247-831-91	CARBON	1K 5% 1/4W
R6876	1-260-288-11	CARBON	0.47 5% 1/2W
R6877	1-208-790-11	METAL CHIP	2.2K 0.50% 1/10W
R6878	1-208-770-11	METAL CHIP	330 0.50% 1/10W
R6879	1-216-105-91	RES,CHIP	220K 5% 1/10W
R6880	1-215-441-00	METAL	6.8K 1% 1/4W
R6881	1-215-433-00	METAL	3.3K 1% 1/4W
R6882	1-215-445-00	METAL	10K 1% 1/4W
R6883	1-208-806-11	METAL CHIP	10K 0.50% 1/10W
R6884	1-249-441-11	CARBON	100K 5% 1/4W
R6885	1-208-798-11	METAL CHIP	4.7K 0.50% 1/10W
R6886	1-208-798-11	METAL CHIP	4.7K 0.50% 1/10W
R6887	1-216-081-00	RES,CHIP	22K 5% 1/10W
R6888	1-216-089-91	RES,CHIP	47K 5% 1/10W
R6889	1-260-125-11	CARBON	150K 5% 1/2W
R6890	1-260-125-11	CARBON	150K 5% 1/2W
R6891	1-216-069-00	RES,CHIP	6.8K 5% 1/10W
R6892	1-216-097-91	RES,CHIP	100K 5% 1/10W
R6893	1-216-085-00	RES,CHIP	33K 5% 1/10W
R6894	1-260-133-11	CARBON	680K 5% 1/2W
R6895	1-216-097-91	RES,CHIP	100K 5% 1/10W
R6896	1-216-089-91	RES,CHIP	47K 5% 1/10W
R6897	1-216-097-91	RES,CHIP	100K 5% 1/10W
R6899	1-216-073-00	RES,CHIP	10K 5% 1/10W
R6900	1-208-810-11	METAL CHIP	15K 0.50% 1/10W
R6901	1-208-810-11	METAL CHIP	15K 0.50% 1/10W
R6902	1-249-441-11	CARBON	100K 5% 1/4W
R6903	1-215-923-00	METAL OXIDE	10K 5% 3W
R6905	1-249-389-11	CARBON	4.7 5% 1/4W
R6906	1-216-079-00	RES,CHIP	18K 5% 1/10W
R6907	1-216-079-00	RES,CHIP	18K 5% 1/10W

REF. NO.	PART NO.	DESCRIPTION	REMARK
		<RELAY>	
RY6601	$\Delta$ 1-515-840-12	RELAY	
RY6602	$\Delta$ 1-755-357-11	RELAY, AC POWER	
RY6603	$\Delta$ 1-755-357-11	RELAY, AC POWER	
		<TRANSFORMER>	
T6601	$\Delta$ 1-431-732-12	TRANSFORMER, CONVERTER (SRT)	
T6602	$\Delta$ 1-435-081-11	TRANSFORMER, CONVERTER (PIT)	
T6800	1-429-741-11	TRANSFORMER, DRIVE	
T6801	1-433-934-11	TRANSFORMER, FERRITE (DFT)	
T6802	1-433-489-11	TRANSFORMER, FERRITE (HDT)	
T6803	$\Delta$ 1-453-326-11	FBT ASSY (NX-4601//J1J4)	
T6804	1-433-489-11	TRANSFORMER, FERRITE (HDT)	
		<THERMISTOR>	
TH6601	1-803-540-11	THERMISTOR	
TH6603	1-803-586-11	THERMISTOR, NTC	
		<VARISTOR>	
VD6601	1-803-614-11	VARISTOR	
*****			
	* A-1343-777-A	D1 BOARD MOUNTED	*****
	4-027-606-01	HEAT SINK (TO-220 TYPE)	
	4-382-854-11	SCREW (M3X10), P, SW (+)	
		<CAPACITOR>	
C6101	1-107-714-11	ELECT	10MF 20% 50V
C6102	1-109-953-11	ELECT	2.2MF 20% 50V
C6103	1-107-714-11	ELECT	10MF 20% 50V
C6104	1-126-965-11	ELECT	22MF 20% 50V
C6105	1-104-665-11	ELECT	100MF 20% 25V
C6106	1-163-809-11	CERAMIC CHIP	0.047MF 10% 25V
C6108	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V
C6109	1-126-967-11	ELECT	47MF 20% 50V
C6112	1-163-037-11	CERAMIC CHIP	0.022MF 10% 50V
C6113	1-137-493-11	FILM	0.0047MF 5% 630V
C6114	1-107-909-11	ELECT	47MF 20% 50V
C6115	1-163-005-11	CERAMIC CHIP	470PF 10% 50V
C6116	1-163-275-11	CERAMIC CHIP	0.001MF 5% 50V
C6117	1-163-275-11	CERAMIC CHIP	0.001MF 5% 50V
C6118	1-107-909-11	ELECT	47MF 20% 16V
C6120	1-163-809-11	CERAMIC CHIP	0.047MF 10% 25V
C6121	1-126-963-11	ELECT	4.7MF 20% 50V
C6122	1-126-967-11	ELECT	47MF 20% 50V
C6123	1-163-021-91	CERAMIC CHIP	0.01MF 5% 50V
C6124	1-163-021-91	CERAMIC CHIP	0.01MF 5% 50V



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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C6125	1-104-664-11	ELECT	47MF 20% 16V	D6110	8-719-987-87	DIODE ERA85-009	
C6127	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V	D6133	8-719-911-19	DIODE 1SS119-25	
C6128	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V	D6134	8-719-911-19	DIODE 1SS119-25	
C6129	1-126-964-11	ELECT	10MF 20% 50V	D6201	8-719-109-88	DIODE RD5.6ESB1	
C6131	1-126-964-11	ELECT	10MF 20% 50V	D6210	8-719-109-88	DIODE RD5.6ESB1	
C6133	1-137-194-81	MYLAR	0.47MF 5% 50V	D6350	8-719-914-43	DIODE DAN202K	
C6136	1-129-716-00	FILM	0.015MF 5% 630V	D6351	8-719-914-43	DIODE DAN202K	
C6138	1-126-968-11	ELECT	100MF 20% 50V	D6355	8-719-914-43	DIODE DAN202K	
C6139	1-107-902-11	ELECT	1MF 20% 50V	D6404	8-719-914-43	DIODE DAN202K	
C6140	1-126-960-11	ELECT	1MF 20% 50V				
C6201	1-126-967-11	ELECT	47MF 20% 50V			<IC>	
C6202	1-126-967-11	ELECT	47MF 20% 50V	IC6101	8-752-053-21	IC CXA1211M	
C6203	1-126-967-11	ELECT	47MF 20% 50V	IC6102	8-759-450-95	IC LM393N	
C6204	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V	IC6103	8-759-450-95	IC LM393N	
C6205	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V	IC6104	8-759-803-42	IC LA6500-FA	
C6206	1-126-964-11	ELECT	10MF 20% 50V	IC6105	8-759-450-95	IC LM393N	
C6207	1-126-967-11	ELECT	47MF 20% 50V	IC6106	8-759-198-31	IC UPC1093J-1-T	
C6208	1-126-967-11	ELECT	47MF 20% 50V	IC6108	8-759-567-08	IC MB88141APF-ER	
C6209	1-163-133-00	CERAMIC CHIP	470PF 5% 50V	IC6201	8-759-183-37	IC CA0007AD	
C6210	1-163-009-11	CERAMIC CHIP	0.001MF 10% 50V	IC6202	8-759-135-80	IC UPC358C	
C6211	1-126-964-11	ELECT	10MF 20% 50V	IC6351	8-759-450-95	IC LM393N	
C6212	1-164-222-11	CERAMIC CHIP	0.22MF 25V	IC6353	8-759-231-53	IC TA7805S	
C6350	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V	IC6354	8-759-325-48	IC CA0005AD	
C6351	1-126-967-11	ELECT	47MF 20% 50V	IC6356	8-759-822-38	IC LA6510	
C6353	1-163-251-11	CERAMIC CHIP	100PF 5% 50V			<CHIP CONDUCTOR>	
C6355	1-163-251-11	CERAMIC CHIP	100PF 5% 50V	JR6101	1-216-296-91	SHORT	0
C6356	1-163-809-11	CERAMIC CHIP	0.047MF 10% 25V	JR6102	1-216-296-91	SHORT	0
C6358	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V	JR6103	1-216-296-91	SHORT	0
C6361	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V	JR6104	1-216-295-91	SHORT	0
C6362	1-164-182-11	CERAMIC CHIP	0.0033MF 10% 50V	JR6105	1-216-296-91	SHORT	0
C6365	1-163-809-11	CERAMIC CHIP	0.047MF 10% 25V	JR6106	1-216-296-91	SHORT	0
C6376	1-104-664-11	ELECT	47MF 20% 16V	JR6107	1-216-296-91	SHORT	0
C6377	1-128-551-11	ELECT	22MF 20% 25V	JR6108	1-216-296-91	SHORT	0
C6378	1-115-339-11	CERAMIC CHIP	0.1MF 10% 50V	JR6109	1-216-296-91	SHORT	0
C6380	1-136-495-11	MYLAR	0.068MF 5% 50V	JR6110	1-216-296-91	SHORT	0
C6381	1-126-964-11	ELECT	10MF 20% 50V	JR6111	1-216-296-91	SHORT	0
C6385	1-104-664-11	ELECT	47MF 20% 25V	JR6112	1-216-296-91	SHORT	0
C6386	1-104-664-11	ELECT	47MF 20% 25V	JR6113	1-216-296-91	SHORT	0
C6388	1-126-964-11	ELECT	10MF 20% 50V	JR6114	1-216-296-91	SHORT	0
C6392	1-104-664-11	ELECT	47MF 20% 25V	JR6115	1-216-296-91	SHORT	0
C6409	1-126-963-11	ELECT	4.7MF 20% 50V				
		<CONNECTOR>				<COIL>	
CN6100	1-793-498-11	CONNECTOR, BOARD TO BOARD 50P		L6101	1-416-920-11	INDUCTOR	10MMH
CN6101*	1-564-525-11	PLUG, CONNECTOR 10P		L6102	1-406-989-21	INDUCTOR	10MMH
CN6103*	1-564-518-11	PLUG, CONNECTOR 3P					
CN6104*	1-564-523-11	PLUG, CONNECTOR 8P				<IC LINK>	
		<DIODE>		PS6101	1-533-589-31	LINK, IC	
D6101	8-719-510-02	DIODE D1NS4				<TRANSISTOR>	
D6102	8-719-510-02	DIODE D1NS4		Q6103	8-729-046-33	TRANSISTOR IRF720-LF49	
D6103	8-719-063-73	DIODE D1NL20U-TR		Q6104	8-729-230-49	TRANSISTOR 2SC2712-YG	
D6104	8-719-911-19	DIODE 1SS119-25		Q6105	8-729-230-49	TRANSISTOR 2SC2712-YG	
D6105	8-719-109-60	DIODE RD2.7ESB2					
D6106	8-719-510-02	DIODE D1NS4					
D6108	8-719-911-19	DIODE 1SS119-25					

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
Q6106	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R		R6144	1-208-834-11	METAL CHIP	150K 0.50% 1/10W
Q6107	8-729-140-93	TRANSISTOR 2SB733-34		R6145	1-208-795-11	METAL CHIP	3.6K 0.50% 1/10W
Q6108	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R		R6146	1-208-806-11	METAL CHIP	10K 0.50% 1/10W
Q6118	8-729-230-49	TRANSISTOR 2SC2712-YG		R6149	1-208-824-11	METAL CHIP	56K 0.50% 1/10W
Q6124	8-729-422-33	TRANSISTOR 2SD601A-Q-TX		R6150	1-208-806-11	METAL CHIP	10K 0.50% 1/10W
Q6125	8-729-230-49	TRANSISTOR 2SC2712-YG		R6151	1-216-049-91	RES,CHIP	1K 5% 1/10W
Q6126	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R		R6152	1-216-081-00	RES,CHIP	22K 5% 1/10W
Q6128	8-729-230-49	TRANSISTOR 2SC2712-YG		R6153	1-216-105-91	RES,CHIP	220K 5% 1/10W
Q6201	8-729-230-49	TRANSISTOR 2SC2712-YG		R6154	1-208-810-11	METAL CHIP	15K 0.50% 1/10W
Q6202	8-729-230-49	TRANSISTOR 2SC2712-YG		R6155	1-208-822-11	METAL CHIP	47K 0.50% 1/10W
Q6203	8-729-422-33	TRANSISTOR 2SD601A-Q-TX		R6156	1-216-077-91	RES,CHIP	15K 5% 1/10W
Q6350	8-729-230-49	TRANSISTOR 2SC2712-YG		R6157	1-216-089-91	RES,CHIP	47K 5% 1/10W
Q6356	8-729-230-49	TRANSISTOR 2SC2712-YG		R6158	1-216-689-11	RES,CHIP	39K 5% 1/10W
Q6405	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R		R6159	1-208-802-11	METAL CHIP	6.8K 0.50% 1/10W
Q6455	8-729-230-49	TRANSISTOR 2SC2712-YG		R6161	1-208-818-11	METAL CHIP	33K 0.50% 1/10W
		<RESISTOR>		R6162	1-216-049-91	RES,CHIP	1K 5% 1/10W
R6101	1-216-025-91	RES,CHIP	100 5% 1/10W	R6168	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R6103	1-216-049-91	RES,CHIP	1K 5% 1/10W	R6169	1-208-806-11	METAL CHIP	10K 0.50% 1/10W
R6104	1-216-065-91	RES,CHIP	4.7K 5% 1/10W	R6170	1-216-037-00	RES,CHIP	330 5% 1/10W
R6105	1-208-798-11	METAL CHIP	4.7K 0.50% 1/10W	R6171	1-216-113-00	RES,CHIP	470K 5% 1/10W
R6106	1-208-798-11	METAL CHIP	4.7K 0.50% 1/10W	R6172	1-216-105-91	RES,CHIP	220K 5% 1/10W
R6107	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R6173	1-216-097-91	RES,CHIP	100K 5% 1/10W
R6108	1-216-073-00	RES,CHIP	10K 5% 1/10W	R6174	1-216-081-00	RES,CHIP	22K 5% 1/10W
R6109	1-216-073-00	RES,CHIP	10K 5% 1/10W	R6175	1-208-816-11	METAL CHIP	27K 0.50% 1/10W
R6110	1-216-295-91	SHORT	0	R6176	1-249-389-11	CARBON	4.7 5% 1/4W
R6112	1-208-824-11	METAL CHIP	56K 0.50% 1/10W	R6177	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R6113	1-216-089-91	RES,CHIP	47K 5% 1/10W	R6178	1-249-389-11	CARBON	4.7 5% 1/4W
R6114	1-208-806-11	METAL CHIP	10K 0.50% 1/10W	R6179	1-216-101-00	RES,CHIP	150K 5% 1/10W
R6115	1-208-814-91	METAL CHIP	22K 0.50% 1/10W	R6180	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R6116	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R6181	1-216-105-91	RES,CHIP	220K 5% 1/10W
R6117	1-208-782-11	METAL CHIP	1K 0.50% 1/10W	R6190	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R6118	1-208-810-11	METAL CHIP	15K 0.50% 1/10W	R6192	1-216-295-91	SHORT	0
R6119	1-208-796-11	METAL CHIP	3.9K 0.50% 1/10W	R6195	1-208-800-11	METAL CHIP	5.6K 0.50% 1/10W
R6120	1-208-806-11	METAL CHIP	10K 0.50% 1/10W	R6196	1-249-377-11	CARBON	0.47 5% 1/4W
R6121	1-216-490-11	METAL OXIDE	39K 5% 3W	R6200	1-208-824-11	METAL CHIP	56K 0.50% 1/10W
R6122	1-216-295-91	SHORT	0	R6201	1-247-750-11	CARBON	680 5% 1/2W
R6123	1-208-782-11	METAL CHIP	1K 0.50% 1/10W	R6202	1-216-061-00	RES,CHIP	3.3K 5% 1/10W
R6124	1-208-808-11	METAL CHIP	12K 0.50% 1/10W	R6203	1-215-906-11	METAL OXIDE	15 5% 3W
R6125	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R6204	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R6126	1-208-798-11	METAL CHIP	4.7K 0.50% 1/10W	R6206	1-216-033-00	RES,CHIP	220 5% 1/10W
R6127	1-208-832-11	METAL CHIP	120K 0.50% 1/10W	R6207	1-208-794-11	METAL CHIP	3.3K 0.50% 1/10W
R6128	1-208-838-91	METAL CHIP	220K 0.50% 1/10W	R6208	1-208-806-11	METAL CHIP	10K 0.50% 1/10W
R6129	1-216-353-00	METAL OXIDE	2.2 5% 1W	R6209	1-216-099-00	RES,CHIP	120K 5% 1/10W
R6130	1-216-073-00	RES,CHIP	10K 5% 1/10W	R6210	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R6131	1-208-804-11	METAL CHIP	8.2K 0.50% 1/10W	R6211	1-216-073-00	RES,CHIP	10K 5% 1/10W
R6133	1-208-812-11	METAL CHIP	18K 0.50% 1/10W	R6212	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R6134	1-208-806-11	METAL CHIP	10K 0.50% 1/10W	R6213	1-216-097-91	RES,CHIP	100K 5% 1/10W
R6135	1-216-073-00	RES,CHIP	10K 5% 1/10W	R6215	1-216-089-91	RES,CHIP	47K 5% 1/10W
R6136	1-260-099-11	CARBON	1K 5% 1/2W	R6216	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R6137	1-216-049-91	RES,CHIP	1K 5% 1/10W	R6217	1-216-073-00	RES,CHIP	10K 5% 1/10W
R6138	1-208-798-11	METAL CHIP	4.7K 0.50% 1/10W	R6218	1-208-836-11	METAL CHIP	180K 0.50% 1/10W
R6139	1-208-797-11	METAL CHIP	4.3K 0.50% 1/10W	R6219	1-208-782-11	METAL CHIP	1K 0.50% 1/10W
R6140	1-216-077-91	RES,CHIP	15K 5% 1/10W	R6220	1-208-822-11	METAL CHIP	47K 0.50% 1/10W
R6141	1-208-830-11	METAL CHIP	100K 0.50% 1/10W	R6221	1-208-822-11	METAL CHIP	47K 0.50% 1/10W
R6142	1-208-806-11	METAL CHIP	10K 0.50% 1/10W	R6222	1-216-295-91	SHORT	0
R6143	1-208-800-11	METAL CHIP	5.6K 0.50% 1/10W	R6223	1-216-295-91	SHORT	0
				R6224	1-208-824-11	METAL CHIP	56K 0.50% 1/10W



REF. NO.	PART NO.	DESCRIPTION	REMARK
R6225	1-208-824-11	METAL CHIP	56K 0.50% 1/10W
R6226	1-216-033-00	RES,CHIP	220 5% 1/10W
R6227	1-216-033-00	RES,CHIP	220 5% 1/10W
R6324	1-216-017-91	RES,CHIP	47 5% 1/10W
R6325	1-216-017-91	RES,CHIP	47 5% 1/10W
R6326	1-208-808-11	METAL CHIP	12K 0.50% 1/10W
R6327	1-216-067-00	RES,CHIP	5.6K 5% 1/10W
R6350	1-216-067-00	RES,CHIP	5.6K 5% 1/10W
R6357	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R6359	1-216-097-91	RES,CHIP	100K 5% 1/10W
R6360	1-216-073-00	RES,CHIP	10K 5% 1/10W
R6361	1-216-097-91	RES,CHIP	100K 5% 1/10W
R6367	1-208-808-11	METAL CHIP	12K 0.50% 1/10W
R6368	1-208-810-11	METAL CHIP	15K 0.50% 1/10W
R6375	1-216-041-00	RES,CHIP	470 5% 1/10W
R6378	1-215-473-00	METAL	150K 1% 1/4W
R6379	1-216-295-91	SHORT	0
R6382	1-208-830-11	METAL CHIP	100K 0.50% 1/10W
R6385	1-216-295-91	SHORT	0
R6386	1-208-830-11	METAL CHIP	100K 0.50% 1/10W
R6391	1-216-049-91	RES,CHIP	1K 5% 1/10W
R6394	1-216-069-00	RES,CHIP	6.8K 5% 1/10W
R6413	1-208-806-11	METAL CHIP	10K 0.50% 1/10W
R6416	1-208-808-11	METAL CHIP	12K 0.50% 1/10W
R6418	1-216-113-00	RES,CHIP	470K 5% 1/10W
R6419	1-216-097-91	RES,CHIP	100K 5% 1/10W
R6420	1-216-111-00	RES,CHIP	390K 5% 1/10W
R6433	1-216-097-91	RES,CHIP	100K 5% 1/10W
R6438	1-215-437-00	METAL	4.7K 1% 1/4W
R6442	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R6456	1-216-097-91	RES,CHIP	100K 5% 1/10W
R6457	1-208-820-11	METAL CHIP	39K 0.50% 1/10W
R6458	1-216-089-91	RES,CHIP	47K 5% 1/10W
R6459	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
*****			
* A-1343-791-A	DH BOARD MOUNTED (KV-ES34M31)		
* A-1343-851-A	DH BOARD MOUNTED (KV-ES34M61)		
* A-1343-850-A	DH BOARD MOUNTED (KV-ES34M80/ES34M90)		
	*****		
	<CAPACITOR>		
C3801	1-126-964-11	CERAMIC	10MF 20% 50V (Except KV-ES34M31)
C3804	1-102-129-00	ELECT	0.01MF 10% 50V (Except KV-ES34M31)
C3805	1-126-964-11	ELECT	10MF 20% 50V (Except KV-ES34M31)
C3807	1-102-129-00	CERAMIC	0.01MF 10% 50V (Except KV-ES34M31)
C3816	1-126-964-11	ELECT	10MF 20% 50V (Except KV-ES34M31)
C3819	1-126-960-11	ELECT	1MF 20% 50V (Except KV-ES34M31)
C3822	1-136-165-00	MYLAR	10MF 5% 50V (Except KV-ES34M31)

REF. NO.	PART NO.	DESCRIPTION	REMARK
		<CONNECTOR>	
CN3801	1-695-915-11	TAB (CONTACT)	
CN3802*	1-564-509-11	PLUG, CONNECTOR 6P (Except KV-ES34M31)	
CN3803	1-695-915-11	TAB (CONTACT)	
		<DIODE>	
D3805	8-719-911-19	DIODE 1SS119-25 (Except KV-ES34M31)	
		<IC>	
IC3805	8-759-822-38	IC LA6510 (Except KV-ES34M31)	
IC3807	1-418-597-11	SENSOR UNIT, MAGNETIC (Except KV-ES34M31)	
		<NEON LAMP>	
NL3801	1-576-414-21	GAP, SPARK	
		<TRANSISTOR>	
Q3807	8-729-030-02	TRANSISTOR DTC144ESA (Except KV-ES34M31)	
Q3808	8-729-030-02	TRANSISTOR DTC144ESA (Except KV-ES34M31)	
Q3809	8-729-119-78	TRANSISTOR 2SC2785-HFE (Except KV-ES34M31)	
Q3810	8-729-119-76	TRANSISTOR 2SA1175-HFE (Except KV-ES34M31)	
Q3811	8-729-119-78	TRANSISTOR 2SC2785-HFE (Except KV-ES34M31)	
Q3812	8-729-119-78	TRANSISTOR 2SC2785-HFE (Except KV-ES34M31)	
		<RESISTOR>	
R3802	1-249-417-11	CARBON	1K 5% 1/4W (Except KV-ES34M31)
R3803	1-249-417-11	CARBON	1K 5% 1/4W (Except KV-ES34M31)
R3804	1-215-444-00	METAL	9.1K 1% 1/4W (Except KV-ES34M31)
R3805	1-249-417-11	CARBON	1K 5% 1/4W (Except KV-ES34M31)
R3807	1-215-413-00	METAL	470K 1% 1/4W (Except KV-ES34M31)
R3808	1-247-883-00	CARBON	150K 5% 1/4W (Except KV-ES34M31)
R3809	1-247-876-11	CARBON	75K 5% 1/4W (Except KV-ES34M31)
R3810	1-249-425-11	CARBON	4.7K 5% 1/4W (Except KV-ES34M31)
R3811	1-219-510-11	CARBON	470K 5% 1/2W (Except KV-ES34M31)
R3812	1-219-759-11	CARBON	1M 5% 1/2W (Except KV-ES34M31)
R3814	1-249-411-11	CARBON	330K 5% 1/4W (Except KV-ES34M31)
R3823	1-249-395-11	CARBON	15K 5% 1/4W (Except KV-ES34M31)
R3825	1-249-417-11	CARBON	1K 5% 1/4W (Except KV-ES34M31)
R3828	1-249-377-11	CARBON	0.47K 5% 1/4W (Except KV-ES34M31)
R3839	1-249-429-11	CARBON	10K 5% 1/4W (Except KV-ES34M31)



REF. NO.	PART NO.	DESCRIPTION	REMARK		
R3845	1-249-425-11	CARBON	4.7K	5%	1/4W
			(Except KV-ES34M31)		
R3846	1-249-417-11	CARBON	1K	5%	1/4W
			(Except KV-ES34M31)		
R3847	1-249-807-31	CARBON	100K	5%	1/4W
			(Except KV-ES34M31)		
R3848	1-249-417-11	CARBON	1K	5%	1/4W
			(Except KV-ES34M31)		
R3849	1-249-377-11	CARBON	0.47K	5%	1/4W
			(Except KV-ES34M31)		
R3850	1-535-303-00	LEAD, JUMPER	5.0MM	(Except KV-ES34M31)	
R3851	1-535-303-00	LEAD, JUMPER	5.0MM	(Except KV-ES34M31)	
R3852	1-249-441-11	CARBON	100K	5%	1/4W
			(Except KV-ES34M31)		
R3854	1-249-429-11	CARBON	10K	5%	1/4W
			(Except KV-ES34M31)		
*****					
* A-1343-778-B E BOARD MOUNTED					
*****					
<CAPACITOR>					
C4301	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C4308	1-126-960-11	ELECT	1MF	20%	50V
C4309	1-164-489-11	CERAMIC CHIP	0.22MF	10%	16V
C4316	1-104-664-11	ELECT	47MF	20%	25V
C4317	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C4318	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C4319	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C4320	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C4321	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C4322	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C4324	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C4325	1-163-093-00	CERAMIC CHIP	10PF	5%	50V
C4326	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C4327	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C4328	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C4329	1-126-963-11	ELECT	4.7MF	20%	50V
C4330	1-136-244-11	FILM	0.1MF	5%	50V
C4331	1-126-959-11	ELECT	0.47MF	20%	50V
C4332	1-136-161-00	MYLAR	0.047MF	5%	50V
C4333	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C4334	1-126-967-11	ELECT	47MF	20%	50V
C4336	1-126-967-11	ELECT	47MF	20%	50V
C4338	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C4339	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C4340	1-126-967-11	ELECT	47MF	20%	50V
C4341	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C4342	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C4343	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C4344	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C4345	1-126-967-11	ELECT	47MF	20%	50V
C4346	1-164-346-11	CERAMIC CHIP	1MF		16V
C4347	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C4348	1-164-346-11	CERAMIC CHIP	1MF		16V

REF. NO.	PART NO.	DESCRIPTION	REMARK		
C4349	1-164-346-11	CERAMIC CHIP	1MF		16V
C4350	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C4351	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C4352	1-126-967-11	ELECT	47MF	20%	50V
C4353	1-107-823-11	CERAMIC CHIP	0.47MF	10%	16V
C4354	1-107-823-11	CERAMIC CHIP	0.47MF	10%	16V
C4355	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C4356	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C4357	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C4358	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C4359	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C4360	1-126-963-11	ELECT	4.7MF	20%	50V
C4362	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C4363	1-126-967-11	ELECT	47MF	20%	50V
C4364	1-126-967-11	ELECT	47MF	20%	50V
C4366	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C4367	1-104-760-11	CERAMIC CHIP	0.047MF	10%	50V
C4369	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C4370	1-126-967-11	ELECT	47MF	20%	50V
C4371	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C4378	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C4800	1-136-165-00	MYLAR	0.1MF	5%	50V
C4801	1-136-161-00	MYLAR	0.047MF	5%	50V
C4802	1-163-275-11	CERAMIC CHIP	0.001MF	5%	50V
C4803	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C4804	1-126-967-11	ELECT	47MF	20%	50V
C4805	1-126-964-11	ELECT	10MF	20%	50V
C4806	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C4808	1-136-165-00	MYLAR	0.1MF	5%	50V
C4809	1-163-275-11	CERAMIC CHIP	0.001MF	5%	50V
C4811	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C4812	1-126-967-11	ELECT	47MF	20%	50V
C4813	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C4814	1-126-967-11	ELECT	47MF	20%	50V
C4815	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C4816	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C4817	1-126-967-11	ELECT	47MF	20%	50V
C4818	1-107-906-11	ELECT	10MF	20%	50V
C4820	1-107-909-11	ELECT	47MF	20%	50V
C4821	1-107-909-11	ELECT	47MF	20%	16V
C4822	1-107-909-11	ELECT	47MF	20%	16V
C4823	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C4824	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C4825	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C4833	1-126-964-11	ELECT	10MF	20%	50V
C4834	1-126-933-11	ELECT	100MF	20%	16V
C4835	1-164-004-1	CERAMIC CHIP	0.1MF	10%	25V
C4836	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C4837	1-163-275-11	CERAMIC CHIP	0.001MF	5%	5V
<CONNECTOR>					
CN4101	1-793-497-11	CONNECTOR, BOARD TO BOARD 40P			
CN4500*	1-564-512-11	PLUG, CONNECTOR 9P			
CN4502*	1-564-506-11	PLUG, CONNECTOR 3P			

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
		<DIODE>		Q4304	8-729-230-49	TRANSISTOR 2SC2712-YG	
D4303	8-719-109-72	DIODE RD3.9ESB2		Q4307	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
D4304	8-719-977-22	DIODE DTZ9.1		Q4308	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
D4305	8-719-977-22	DIODE DTZ9.1		Q4310	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
D4311	8-719-914-43	DIODE DAN202K		Q4315	1-801-806-11	TRANSISTOR DTC144EKA-T146	
D4312	8-719-914-43	DIODE DAN202K		Q4316	8-729-230-49	TRANSISTOR 2SC2712-YG	
				Q4317	8-729-900-53	TRANSISTOR DTC114EK	
D4313	8-719-401-63	DIODE MA3062M-TX					
D4314	8-719-914-43	DIODE DAN202K		Q4319	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
D4800	8-719-914-43	DIODE DAN202K		Q4320	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
D4801	8-719-914-43	DIODE DAN202K		Q4321	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
D4803	8-719-911-19	DIODE ISS119-25		Q4322	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
				Q4800	8-729-230-49	TRANSISTOR 2SC2712-YG	
D4804	8-719-911-19	DIODE ISS119-25					
D4807	8-719-914-43	DIODE DAN202K		Q4801	8-729-230-49	TRANSISTOR 2SC2712-YG	
D4808	8-719-914-43	DIODE DAN202K		Q4802	8-729-230-49	TRANSISTOR 2SC2712-YG	
D4809	8-719-914-43	DIODE DAN202K		Q4803	8-729-230-49	TRANSISTOR 2SC2712-YG	
D4811	8-719-109-54	DIODE RD2.2ESB2		Q4804	8-729-230-49	TRANSISTOR 2SC2712-YG	
				Q4805	8-729-230-49	TRANSISTOR 2SC2712-YG	
D4812	8-719-911-19	DIODE ISS119-25					
D4813	8-719-914-43	DIODE DAN202K		Q4806	8-729-230-49	TRANSISTOR 2SC2712-YG	
D4814	8-719-914-43	DIODE DAN202K		Q4807	8-729-230-49	TRANSISTOR 2SC2712-YG	
D4815	8-719-109-54	DIODE RD2.2ESB2		Q4808	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
D4816	8-719-911-19	DIODE ISS119-25		Q4809	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
				Q4810	8-729-230-49	TRANSISTOR 2SC2712-YG	
		<FERRITE BEAD>		Q4811	8-729-230-49	TRANSISTOR 2SC2712-YG	
FB4387	1-216-295-91	SHORT	0	Q4812	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
FB4388	1-216-295-91	SHORT	0	Q4813	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
FB4389	1-216-295-91	SHORT	0	Q4814	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
				Q4815	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
		<IC>		Q4816	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
IC4301	8-752-090-87	IC CXA2100AQ		Q4817	8-729-230-49	TRANSISTOR 2SC2712-YG	
IC4800	8-759-450-95	IC LM393N		Q4818	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
IC4801	8-759-450-95	IC LM393N		Q4820	8-729-230-49	TRANSISTOR 2SC2712-YG	
IC4802	8-759-701-50	IC NJM3404AD		Q4821	1-801-806-11	TRANSISTOR DTC144EKA-T146	
IC4803	8-759-135-80	IC UPC358C					
				Q4822	8-729-230-49	TRANSISTOR 2SC2712-YG	
				Q4823	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
				Q4824	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
				Q4825	8-729-230-49	TRANSISTOR 2SC2712-YG	
		<CHIP CONDUCTOR>		Q4826	8-729-230-49	TRANSISTOR 2SC2712-YG	
JR4301	1-216-295-91	SHORT	0				
						<RESISTOR>	
		<COIL>		R4301	1-216-025-91	RES,CHIP	100 5% 1/10W
				R4302	1-216-025-91	RES,CHIP	100 5% 1/10W
L4301	1-412-029-11	INDUCTOR CHIP	10UH	R4303	1-216-025-91	RES,CHIP	100 5% 1/10W
L4302	1-412-029-11	INDUCTOR CHIP	10UH	R4304	1-216-025-91	RES,CHIP	100 5% 1/10W
L4303	1-412-029-11	INDUCTOR CHIP	10UH	R4305	1-216-025-91	RES,CHIP	100 5% 1/1

E

REF. NO.	PART NO.	DESCRIPTION	REMARK			REF. NO.	PART NO.	DESCRIPTION	REMARK		
R4319	1-208-804-11	METAL CHIP	8.2K	0.50%	1/10W	R4388	1-216-295-91	SHORT	0		
R4320	1-208-790-11	METAL CHIP	2.2K	0.50%	1/10W	R4389	1-216-295-91	SHORT	0		
R4321	1-216-298-00	RES,CHIP	2.2	5%	1/10W	R4395	1-216-295-91	SHORT	0		
R4323	1-208-814-91	METAL CHIP	22K	0.50%	1/10W						
R4324	1-208-798-11	METAL CHIP	4.7K	0.50%	1/10W	R4396	1-216-295-91	SHORT	0		
						R4397	1-216-295-91	SHORT	0		
R4325	1-208-818-11	METAL CHIP	33K	0.50%	1/10W	R4399	1-247-807-31	CARBON	100	5%	1/4
R4326	1-208-826-11	METAL CHIP	68K	0.50%	1/10W	R4401	1-216-105-91	RES,CHIP	220K	5%	1/10W
R4327	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	R4408	1-216-025-91	RES,CHIP	100	5%	1/10W
R4329	1-208-782-11	METAL CHIP	1K	0.50%	1/10W						
R4330	1-216-089-91	RES,CHIP	47K	5%	1/10W	R4409	1-216-073-00	RES,CHIP	10K	5%	1/10W
						R4410	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R4331	1-216-025-91	RES,CHIP	100	5%	1/10W	R4411	1-216-073-00	RES,CHIP	10K	5%	1/10W
R4332	1-216-025-91	RES,CHIP	100	5%	1/10W	R4412	1-216-097-91	RES,CHIP	100K	5%	1/10W
R4333	1-216-025-91	RES,CHIP	100	5%	1/10W	R4518	1-216-025-91	RES,CHIP	100	5%	1/10W
R4334	1-216-049-91	RES,CHIP	1K	5%	1/10W						
R4335	1-216-025-91	RES,CHIP	100	5%	1/10W	R4519	1-216-073-00	RES,CHIP	10K	5%	1/10W
						R4520	1-216-025-91	RES,CHIP	100	5%	1/10W
R4336	1-216-025-91	RES,CHIP	100	5%	1/10W	R4521	1-216-025-91	RES,CHIP	100	5%	1/10W
R4337	1-216-025-91	RES,CHIP	100	5%	1/10W	R4800	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R4338	1-216-041-00	RES,CHIP	470	5%	1/10W	R4801	1-216-049-91	RES,CHIP	1K	5%	1/10W
R4339	1-216-051-00	RES,CHIP	1.2K	5%	1/10W						
R4341	1-216-295-91	SHORT	0			R4802	1-216-073-00	RES,CHIP	10K	5%	1/10W
						R4803	1-216-049-91	RES,CHIP	1K	5%	1/10W
R4343	1-216-025-91	RES,CHIP	100	5%	1/10W	R4804	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R4344	1-216-025-91	RES,CHIP	100	5%	1/10W	R4805	1-208-792-11	METAL CHIP	2.7K	0.50%	1/10W
R4345	1-216-075-00	RES,CHIP	12K	5%	1/10W	R4806	1-208-792-11	METAL CHIP	2.7K	0.50%	1/10W
R4346	1-208-812-11	METAL CHIP	18K	0.50%	1/10W						
R4347	1-216-025-91	RES,CHIP	100	5%	1/10W	R4807	1-216-049-91	RES,CHIP	1K	5%	1/10W
						R4809	1-216-073-00	RES,CHIP	10K	5%	1/10W
R4348	1-216-025-91	RES,CHIP	100	5%	1/10W	R4810	1-208-814-91	METAL CHIP	22K	0.50%	1/10W
R4349	1-216-041-00	RES,CHIP	470	5%	1/10W	R4811	1-208-814-91	METAL CHIP	22K	0.50%	1/10W
R4350	1-216-025-91	RES,CHIP	100	5%	1/10W	R4812	1-216-295-91	SHORT	0		
R4351	1-216-081-00	RES,CHIP	22K	5%	1/10W						
R4352	1-216-041-00	RES,CHIP	470	5%	1/10W	R4813	1-216-089-91	RES,CHIP	47K	5%	1/10W
						R4814	1-208-830-11	METAL CHIP	100K	0.50%	1/10W
R4353	1-216-051-00	RES,CHIP	1.2K	5%	1/10W	R4815	1-208-830-11	METAL CHIP	100K	0.50%	1/10W
R4354	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	R4816	1-216-073-00	RES,CHIP	10K	5%	1/10W
R4355	1-216-049-91	RES,CHIP	1K	5%	1/10W	R4817	1-208-846-11	METAL CHIP	470K	0.50%	1/10W
R4356	1-216-049-91	RES,CHIP	1K	5%	1/10W						
R4357	1-216-073-00	RES,CHIP	10K	5%	1/10W	R4818	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
						R4819	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R4358	1-216-071-00	RES,CHIP	8.2K	5%	1/10W	R4820	1-216-073-00	RES,CHIP	10K	5%	1/10W
R4359	1-216-041-00	RES,CHIP	470	5%	1/10W	R4821	1-216-073-00	RES,CHIP	10K	5%	1/10W
R4360	1-216-057-00	RES,CHIP	2.2K	5%	1/10W	R4822	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R4361	1-216-133-00	RES,CHIP	3.3M	5%	1/10W						
R4363	1-216-025-91	RES,CHIP	100	5%	1/10W	R4823	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
						R4824	1-216-073-00	RES,CHIP	10K	5%	1/10W
R4365	1-216-025-91	RES,CHIP	100	5%	1/10W	R4825	1-216-073-00	RES,CHIP	10K	5%	1/10W
R4366	1-216-025-91	RES,CHIP	100	5%	1/10W	R4826	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R4367	1-216-025-91	RES,CHIP	100	5%	1/10W	R4827	1-216-295-91	SHORT	0		
R4369	1-216-025-91	RES,CHIP	100	5%	1/10W						
R4370	1-216-049-91	RES,CHIP	1K	5%	1/10W	R4828	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
						R4829	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R4372	1-216-049-91	RES,CHIP	1K	5%	1/10W	R4831	1-208-791-11	METAL CHIP	2.4K	0.50%	1/10W
R4373	1-216-295-91	SHORT	0			R4832	1-208-822-11	METAL CHIP	47K	0.50%	1/10W
R4374	1-216-025-91	RES,CHIP	100	5%	1/10W	R4833	1-208-822-11	METAL CHIP	47K	0.50%	1/10W
R4375	1-216-049-91	RES,CHIP	1K	5%	1/10W						
R4376	1-216-025-91	RES,CHIP	100	5%	1/10W	R4834	1-208-790-11	METAL CHIP	2.2K	0.50%	1/10W
						R4835	1-208-790-11	METAL CHIP	2.2K	0.50%	1/10W
R4377	1-216-049-91	RES,CHIP	1K	5%	1/10W	R4836	1-208-822-11	METAL CHIP	47K	0.50%	1/10W
R4380	1-216-073-00	RES,CHIP	10K	5%	1/10W	R4837	1-208-822-11	METAL CHIP	47K	0.50%	1/10W
R4381	1-216-125-00	RES,CHIP	1.5M	5%	1/10W	R4838	1-208-830-11	METAL CHIP	100K	0.50%	1/10W
R4382	1-216-073-00	RES,CHIP	10K	5%	1/10W						
R4383	1-216-079-00	RES,CHIP	18K	5%	1/10W	R4839	1-208-804-11	METAL CHIP	8.2K	0.50%	1/10W
						R4840	1-216-295-91	SHORT	0		
R4384	1-216-025-91	RES,CHIP	100	5%	1/10W	R4841	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R4387	1-216-295-91	SHORT	0								

The components identified by shading  
and mark  $\triangle$  are critical for safety.  
Replace only with part number specified.



REF. NO.	PART NO.	DESCRIPTION	REMARK
R4842	1-208-822-11	METAL CHIP	47K 0.50% 1/10W
R4843	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R4844	1-208-800-11	METAL CHIP	5.6K 0.50% 1/10W
R4845	1-208-830-11	METAL CHIP	100K 0.50% 1/10W
R4846	1-208-766-11	METAL CHIP	220 0.50% 1/10W
R4847	1-216-073-00	RES,CHIP	10K 5% 1/10W
R4848	1-216-073-00	RES,CHIP	10K 5% 1/10W
R4849	1-216-095-00	RES,CHIP	82K 5% 1/10W
R4850	1-216-097-91	RES,CHIP	100K 5% 1/10W
R4851	1-216-053-00	RES,CHIP	1.5K 5% 1/10W
R4852	1-216-081-00	RES,CHIP	22K 5% 1/10W
R4853	1-216-053-00	RES,CHIP	1.5K 5% 1/10W
R4854	1-216-061-00	RES,CHIP	3.3K 5% 1/10W
R4855	1-216-077-91	RES,CHIP	15K 5% 1/10W
R4856	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R4857	1-208-810-11	METAL CHIP	15K 0.50% 1/10W
R4858	1-208-808-11	METAL CHIP	12K 0.50% 1/10W
R4859	1-208-792-11	METAL CHIP	2.7K 0.50% 1/10W
R4860	1-208-798-11	METAL CHIP	4.7K 0.50% 1/10W
R4861	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R4862	1-208-810-11	METAL CHIP	15K 0.50% 1/10W
R4864	1-208-790-11	METAL CHIP	2.2K 0.50% 1/10W
R4865	1-208-781-91	METAL CHIP	910 0.50% 1/10W
R4866	1-216-089-91	RES,CHIP	47K 5% 1/10W
R4869	1-208-814-91	METAL CHIP	22K 0.50% 1/10W
R4871	1-208-820-11	METAL CHIP	39K 0.50% 1/10W
R4872	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R4874	1-216-295-91	SHORT	0
R4875	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R4877	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R4878	1-208-836-11	METAL CHIP	180K 0.50% 1/10W
R4879	1-216-105-91	RES,CHIP	220K 5% 1/10W
R4881	1-216-295-91	SHORT	0
R4882	1-208-834-11	METAL CHIP	150K 0.50% 1/10W
R4883	1-208-842-11	METAL CHIP	330K 0.50% 1/10W
R4884	1-208-822-11	METAL CHIP	47K 0.50% 1/10W
R4886	1-208-822-11	METAL CHIP	47K 0.50% 1/10W
R4887	1-208-814-91	METAL CHIP	22K 0.50% 1/10W
R4892	1-216-295-91	SHORT	0
R4894	1-216-073-00	RES,CHIP	10K 5% 1/10W
R4895	1-216-073-00	RES,CHIP	10K 5% 1/10W
R4908	1-216-049-91	RES, CHIP	1K 5% 1/10W
R4909	1-216-065-91	RES, CHIP	4.7K 5% 1/10W
R4910	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R4911	1-208-818-11	RES,CHIP	33K 0.5% 1/10W
R4912	1-208-806-11	METAL, CHIP	10K 0.50% 1/10W
R4913	1-208-806-11	METAL, CHIP	10K 5% 1/10W
R4914	1-216-057-00	RES, CHIP	2.2K 5% 1/10W
<CRYSTAL>			
X4300	1-767-127-11	VIBRATOR, CERAMIC	

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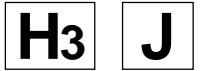
REF. NO.	PART NO.	DESCRIPTION	REMARK
* A-1241-402-A F1 BOARD MOUNTED *****			
1-533-223-11	HOLDER, FUSE		
* 4-374-846-01	COVER, CAPACITOR, CAP TYPE		
<CAPACITOR>			
C1601 $\triangle$	1-104-708-51	MYLAR	0.47MF 20% 250V
C1602 $\triangle$	1-109-835-51	MYLAR	0.68MF 20% 250V
C1603 $\triangle$	1-117-703-51	CERAMIC	0.0047MF 99% 250V
<CONNECTOR>			
CN1601* $\triangle$	1-580-843-11	PIN, CONNECTOR (POWER)	
CN1602* $\triangle$	1-580-843-11	PIN, CONNECTOR (POWER)	
CN1603	1-695-915-11	TAB (CONTACT)	
CN1604	1-695-915-11	TAB (CONTACT)	
<FUSE>			
F1601 $\triangle$	1-532-299-11	FUSE, TIME-LAG 5A/250V	
<FERRITE BEAD>			
FB1601	1-410-397-21	FERRITE	1.1UH
FB1602	1-410-397-21	FERRITE	1.1UH
FB1603	1-410-397-21	FERRITE	1.1UH
FB1604	1-410-397-21	FERRITE	1.1UH
<RESISTOR>			
R1601 $\triangle$	1-202-885-91	SOLID	1M 10% 1/2W
<TRANSFORMER>			
T1601 $\triangle$	1-433-900-11	TRANSFORMER, LINE FILTER	
T1602 $\triangle$	1-433-900-11	TRANSFORMER, LINE FILTER	
<VARISTOR>			
VDR161	1-803-830-31	VARISTOR (ERZV14D621)	
*****			
* A-1241-403-A F2 BOARD MOUNTED *****			
<CONNECTOR>			
CN1651*	1-580-843-11	PIN, CONNECTOR (POWER)	
CN1652*	1-691-291-11	PIN, CONNECTOR (PC BOARD) 5P	



REF. NO.	PART NO.	DESCRIPTION	REMARK
		<SWITCH>	
S1651	△ 1-571-433-31	SWITCH, PUSH (AC POWER)	
*****			
* A-1372-728-A	H1	BOARD MOUNTED	*****
* 4-055-304-01	HOLDER, LED		
		<CAPACITOR>	
C1910	1-104-664-11	ELECT	47MF 20% 16V
C1911	1-104-664-11	ELECT	47MF 20% 16V
C1912	1-102-824-00	CERAMIC	470PF 5% 50V
		<CONNECTOR>	
CN1901*	1-564-520-11	PLUG, CONNECTOR 5P	
		<DIODE>	
D1906	8-719-045-19	DIODE SPB-26MVWF	
		<IC>	
IC1901	8-742-134-00	HYB IC SBX1981-51P	
		<TRANSISTOR>	
Q1901	8-729-030-02	TRANSISTOR DTC144ESA	
Q1902	8-729-030-02	TRANSISTOR DTC144ESA	
		<RESISTOR>	
R1911	1-249-411-11	CARBON	330 5% 1/4W
R1913	1-249-429-11	CARBON	10K 5% 1/4W
R1914	1-249-411-11	CARBON	330 5% 1/4W
R1915	1-249-429-11	CARBON	10K 5% 1/4W
R1916	1-249-401-11	CARBON	47 5% 1/4W
R1917	1-247-807-31	CARBON	100 5% 1/4W
R1920	1-247-807-31	CARBON	100 5% 1/4W
R1921	1-247-807-31	CARBON	100 5% 1/4W
*****			
* A-1372-729-A	H2	BOARD MOUNTED	*****
		<CAPACITOR>	
C1930	1-136-153-00	MYLAR	0.01MF 5% 50V
C1932	1-136-153-00	MYLAR	0.01MF 5% 50V
C1935	1-102-824-00	CERAMIC	470PF 5% 50V
C1938	1-102-824-00	CERAMIC	470PF 5% 50V

REF. NO.	PART NO.	DESCRIPTION	REMARK
		<CONNECTOR>	
CN1932*	1-564-509-11	PLUG, CONNECTOR 6P	
CN1934*	1-564-515-11	PLUG, CONNECTOR 12P	
		<DIODE>	
D1930	8-719-121-26	DIODE RD9.1ESL2	
D1935	8-719-121-26	DIODE RD9.1ESL2	
		<JACK>	
J1931	1-770-786-11	JACK	
J1932	1-537-744-11	TERMINAL, S	
J1933	1-770-329-11	JACK, PIN 3P	
		<COIL>	
L1931	1-408-603-31	INDUCTOR	10UH
L1932	1-408-603-31	INDUCTOR	10UH
		<RESISTOR>	
R1933	1-247-895-91	CARBON	470K 5% 1/4W
R1934	1-247-807-31	CARBON	100 5% 1/4W
R1935	1-247-807-31	CARBON	100 5% 1/4W
R1936	1-247-895-91	CARBON	470K 5% 1/4W
R1952	1-249-421-11	CARBON	2.2K 5% 1/4W
		<SWITCH>	
S1931	1-692-431-21	SWITCH, TACTILE	
*****			
* A-1372-730-A	H3	BOARD MOUNTED	*****
		<CONNECTOR>	
CN1980*	1-564-518-11	PLUG, CONNECTOR 3P	
		<RESISTOR>	
R1970	1-249-416-11	CARBON	820 5% 1/4W
R1971	1-247-831-91	CARBON	1K 5% 1/4W
R1972	1-249-418-11	CARBON	1.2K 5% 1/4W
R1973	1-249-420-11	CARBON	1.8K 5% 1/4W
R1974	1-247-843-11	CARBON	3.3K 5% 1/4W
R1975	1-249-427-11	CARBON	6.8K 5% 1/4W
R1976	1-249-432-11	CARBON	18K 5% 1/4W
		<SWITCH>	
S1972	1-572-198-11	SWITCH, KEYBOARD	
S1973	1-572-198-11	SWITCH, KEYBOARD	





REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
S1974	1-572-198-11	SWITCH, KEYBOARD		C8342	1-126-964-11	ELECT 10MF	20% 50V
S1975	1-572-198-11	SWITCH, KEYBOARD		C8343	1-104-664-11	ELECT 47MF	20% 16V
S1976	1-572-198-11	SWITCH, KEYBOARD		C8344	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
S1977	1-572-198-11	SWITCH, KEYBOARD		C8346	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
S1978	1-572-198-11	SWITCH, KEYBOARD		C8347	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
S1979	1-572-198-11	SWITCH, KEYBOARD		C8348	1-126-968-11	ELECT 100MF	20% 16V
				C8349	1-117-720-11	CERAMIC CHIP 4.7MF	10V
				C8352	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V
*****				C8353	1-115-340-11	CERAMIC CHIP 0.22MF	10% 25V
* A-1394-965-A J BOARD COMPLETE				C8354	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V
*****				C8355	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
<CAPACITOR>				C8356	1-164-346-11	CERAMIC CHIP 1MF	16V
C8107	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	C8357	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
C8300	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V	C8358	1-164-346-11	CERAMIC CHIP 1MF	16V
C8301	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	C8359	1-163-037-11	CERAMIC CHIP 0.022MF	10% 50V
C8302	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	C8360	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
C8303	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	C8361	1-126-961-11	ELECT 2.2MF	20% 50V
C8304	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	C8362	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C8305	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	C8363	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C8306	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	C8364	1-104-664-11	ELECT 47MF	20% 16V
C8307	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	C8365	1-104-664-11	ELECT 47MF	20% 16V
C8308	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	C8366	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
C8309	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	C8367	1-104-664-11	ELECT 47MF	20% 16V
C8310	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	C8368	1-104-664-11	ELECT 47MF	20% 16V
C8311	1-164-346-11	CERAMIC CHIP 1MF	16V	C8369	1-104-664-11	ELECT 47MF	20% 16V
C8312	1-164-346-11	CERAMIC CHIP 1MF	16V	C8370	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C8313	1-164-346-11	CERAMIC CHIP 1MF	16V	C8371	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C8314	1-164-346-11	CERAMIC CHIP 1MF	16V	C8372	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C8315	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	C8373	1-163-227-11	CERAMIC CHIP 10PF	0.5PF 50V
C8316	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	C8374	1-164-346-11	CERAMIC CHIP 1MF	16V
C8317	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C8375	1-126-964-11	ELECT 10MF	20% 50V
C8318	1-164-346-11	CERAMIC CHIP 1MF	16V	C8376	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C8319	1-164-346-11	CERAMIC CHIP 1MF	16V	C8381	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
C8320	1-117-720-11	CERAMIC CHIP 4.7MF	10V	C8382	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C8321	1-117-720-11	CERAMIC CHIP 4.7MF	10V	C8386	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
C8322	1-164-346-11	CERAMIC CHIP 1MF	16V	C8390	1-126-963-11	ELECT 4.7MF	20% 50V
C8323	1-164-346-11	CERAMIC CHIP 1MF	16V	C8391	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C8324	1-117-720-11	CERAMIC CHIP 4.7MF	10V	C8392	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C8325	1-126-935-11	ELECT 470MF	20% 16V	C8393	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C8326	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V	C8396	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V
C8327	1-164-346-11	CERAMIC CHIP 1MF	16V	C8399	1-126-961-11	ELECT 2.2MF	20% 50V
C8328	1-164-346-11	CERAMIC CHIP 1MF	16V	C8401	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
C8329	1-163-249-11	CERAMIC CHIP 82PF	5% 50V	C8402	1-164-346-11	CERAMIC CHIP 1MF	16V
C8330	1-164-346-11	CERAMIC CHIP 1MF	16V	C8403	1-163-037-11	CERAMIC CHIP 0.022MF	10% 50V
C8331	1-164-346-11	CERAMIC CHIP 1MF	16V	C8406	1-104-664-11	ELECT 47MF	20% 16V
C8332	1-163-249-11	CERAMIC CHIP 82PF	5% 50V	C8407	1-104-664-11	ELECT 47MF	20% 16V
C8333	1-115-340-11	CERAMIC CHIP 0.22MF	10% 25V	C8408	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
C8334	1-104-664-11	ELECT 47MF	20% 16V	C8410	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C8335	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C8411	1-117-720-11	CERAMIC CHIP 4.7MF	10V
C8336	1-104-664-11	ELECT 47MF	20% 16V	C8412	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C8337	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C8413	1-117-720-11	CERAMIC CHIP 4.7MF	10V
C8338	1-164-346-11	CERAMIC CHIP 1MF	16V	C8414	1-104-664-11	ELECT 47MF	20% 16V
C8339	1-164-346-11	CERAMIC CHIP 1MF	16V	C8415	1-164-346-11	CERAMIC CHIP 1MF	16V
C8340	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V	C8416	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C8341	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V	C8417	1-163-227-11	CERAMIC CHIP 10PF	0.5PF 50V
				C8418	1-126-964-11	ELECT 10MF	20% 50V
				C8419	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
				C8424	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V

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REF. NO.	PART NO.	DESCRIPTION	REMARK
C8425	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
C8430	1-117-720-11	CERAMIC CHIP 4.7MF	10V
C8431	1-163-243-11	CERAMIC CHIP 47PF	5% 50V
C8432	1-163-239-11	CERAMIC CHIP 33PF	5% 50V
C8437	1-126-963-11	ELECT 4.7MF	20% 50V
C8438	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C8439	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C8440	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C8441	1-164-346-11	CERAMIC CHIP 1MF	16V
C8442	1-117-720-11	CERAMIC CHIP 4.7MF	10V
C8443	1-117-720-11	CERAMIC CHIP 4.7MF	10V
C8444	1-117-720-11	CERAMIC CHIP 4.7MF	10V
C8445	1-164-346-11	CERAMIC CHIP 1MF	16V
C8446	1-104-664-11	ELECT 47MF	20% 16V
C8447	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C8448	1-164-690-91	CERAMIC CHIP 0.0022MF	5% 50V
C8450	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V
C8451	1-164-505-11	CERAMIC CHIP 2.2MF	16V
C8452	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C8453	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C8454	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C8455	1-104-664-11	ELECT 47MF	20% 16V
C8456	1-104-664-11	ELECT 47MF	20% 16V
C8457	1-104-664-11	ELECT 47MF	20% 16V
C8459	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C8464	1-104-664-11	ELECT 47MF	20% 16V
C8465	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C8468	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C8471	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C8474	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
<CONNECTOR>			
CN8301*	1-564-524-11	PLUG, CONNECTOR 9P	
CN8302	1-695-915-11	TAB (CONTACT)	
CN8304	1-793-498-11	CONNECTOR, BOARD TO BOARD 50P	
<DIODE>			
D8101	8-719-073-01	DIODE MA111-(K8).SO	
D8102	1-216-295-91	SHORT 0	
D8301	8-719-158-35	DIODE RD9.1SB	
D8302	8-719-158-35	DIODE RD9.1SB	
D8303	8-719-158-35	DIODE RD9.1SB	
D8304	8-719-158-35	DIODE RD9.1SB	
D8305	8-719-158-35	DIODE RD9.1SB	
D8306	8-719-158-35	DIODE RD9.1SB	
D8307	8-719-158-35	DIODE RD9.1SB	
D8308	8-719-158-35	DIODE RD9.1SB	
D8309	8-719-158-35	DIODE RD9.1SB	
D8310	8-719-158-35	DIODE RD9.1SB	
D8311	8-719-158-35	DIODE RD9.1SB	
D8312	8-719-158-35	DIODE RD9.1SB	
D8313	8-719-158-35	DIODE RD9.1SB	
D8314	8-719-158-35	DIODE RD9.1SB	
D8315	8-719-067-40	DIODE STZ6.8N-T146	
D8316	8-719-067-40	DIODE STZ6.8N-T146	

REF. NO.	PART NO.	DESCRIPTION	REMARK
D8317	8-719-067-40	DIODE STZ6.8N-T146	
D8318	8-719-158-35	DIODE RD9.1SB	
D8319	8-719-158-35	DIODE RD9.1SB	
D8320	8-719-158-35	DIODE RD9.1SB	
D8321	8-719-158-35	DIODE RD9.1SB	
D8322	8-719-158-35	DIODE RD9.1SB	
D8323	8-719-158-35	DIODE RD9.1SB	
D8324	8-719-158-35	DIODE RD9.1SB	
D8325	8-719-158-35	DIODE RD9.1SB	
D8331	8-719-041-97	DIODE MA113-(TX)	
<FILTER>			
FL8301	1-236-071-11	ENCAPSULATED COMPONENT	
FL8303	1-236-071-11	ENCAPSULATED COMPONENT	
FL8304	1-236-071-11	ENCAPSULATED COMPONENT	
FL8305	1-236-071-11	ENCAPSULATED COMPONENT	
FL8307	1-236-071-11	ENCAPSULATED COMPONENT	
FL8308	1-236-071-11	ENCAPSULATED COMPONENT	
FL8309	1-236-071-11	ENCAPSULATED COMPONENT	
FL8311	1-236-071-11	ENCAPSULATED COMPONENT	
FL8312	1-236-071-11	ENCAPSULATED COMPONENT	
FL8313	1-236-071-11	ENCAPSULATED COMPONENT	
FL8314	1-233-877-11	FILTER, LOW PASS	
FL8315	1-233-504-21	FILTER, LOW PASS	
FL8316	1-233-504-21	FILTER, LOW PASS	
<IC>			
IC8302	8-752-080-04	IC CXA2069Q	
IC8304	8-759-576-72	IC LF50CDT-TR	
IC8305	8-759-576-74	IC LF90CDT-TR	
IC8306	8-752-094-47	IC CXA2123AQ-T6	
IC8308	8-752-094-47	IC CXA2123AQ-T6	
IC8309	8-759-337-26	IC MM1115XFBE	
IC8310	8-759-572-04	IC TDA9178T/N1.118	
IC8311	8-759-485-79	IC TC7SET08FU(TE85L)	
IC8312	8-759-485-79	IC TC7SET08FU(TE85L)	
IC8314	8-742-175-00	HYB IC SBX3005-11	
<JACK>			
J8106	1-793-787-11	JACK BLOCK, PIN 1P	
J8301	1-774-748-11	TERMINAL BLOCK, S	
J8302	1-774-746-11	JACK BLOCK, PIN	
J8303	1-774-746-11	JACK BLOCK, PIN	
J8304	1-774-746-11	JACK BLOCK, PIN	
J8305	1-695-444-11	PIN JACK BLOCK 3P	
J8307	1-565-838-11	JACK BLOCK, PIN 2P	
<CHIP CONDUCTOR>			
JR8301	1-216-295-91	SHORT	0
JR8302	1-216-295-91	SHORT	0
JR8303	1-216-295-91	SHORT	0
JR8304	1-216-295-91	SHORT	0

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
		<COIL>		Q8512	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
L8302	1-414-196-41	INDUCTOR 47UH				<RESISTOR>	
L8303	1-414-196-41	INDUCTOR 47UH					
L8304	1-414-196-41	INDUCTOR 47UH					
		<TRANSISTOR>		R8208	1-216-295-91	SHORT 0	
Q8301	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R		R8209	1-216-295-91	SHORT 0	
Q8302	8-729-230-49	TRANSISTOR 2SC2712-YG		R8301	1-216-041-00	RES,CHIP 470	5% 1/10W
Q8303	8-729-230-49	TRANSISTOR 2SC2712-YG		R8302	1-216-041-00	RES,CHIP 470	5% 1/10W
Q8304	8-729-230-49	TRANSISTOR 2SC2712-YG		R8303	1-216-021-00	RES,CHIP 68	5% 1/10W
Q8305	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R		R8304	1-216-057-00	RES,CHIP 2.2K	5% 1/10W
Q8306	8-729-230-49	TRANSISTOR 2SC2712-YG		R8305	1-216-113-00	RES,CHIP 470K	5% 1/10W
Q8307	8-729-230-49	TRANSISTOR 2SC2712-YG		R8306	1-216-022-00	RES,CHIP 75	5% 1/10W
Q8308	8-729-230-49	TRANSISTOR 2SC2712-YG		R8307	1-216-022-00	RES,CHIP 75	5% 1/10W
Q8309	8-729-230-49	TRANSISTOR 2SC2712-YG		R8308	1-216-105-91	RES,CHIP 220K	5% 1/10W
Q8310	8-729-230-49	TRANSISTOR 2SC2712-YG		R8309	1-216-105-91	RES,CHIP 220K	5% 1/10W
Q8312	8-729-230-49	TRANSISTOR 2SC2712-YG		R8310	1-216-022-00	RES,CHIP 75	5% 1/10W
Q8313	8-729-230-49	TRANSISTOR 2SC2712-YG		R8311	1-216-105-91	RES,CHIP 220K	5% 1/10W
Q8319	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R		R8312	1-216-105-91	RES,CHIP 220K	5% 1/10W
Q8320	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R		R8313	1-216-022-00	RES,CHIP 75	5% 1/10W
Q8321	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R		R8314	1-216-105-91	RES,CHIP 220K	5% 1/10W
Q8322	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R		R8315	1-216-105-91	RES,CHIP 220K	5% 1/10W
Q8323	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R		R8316	1-216-113-00	RES,CHIP 470K	5% 1/10W
Q8324	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R		R8317	1-216-022-00	RES,CHIP 75	5% 1/10W
Q8325	8-729-230-49	TRANSISTOR 2SC2712-YG		R8318	1-216-022-00	RES,CHIP 75	5% 1/10W
Q8326	8-729-230-49	TRANSISTOR 2SC2712-YG		R8319	1-216-022-00	RES,CHIP 75	5% 1/10W
Q8327	1-801-806-11	TRANSISTOR DTC144EKA-T146		R8320	1-216-105-91	RES,CHIP 220K	5% 1/10W
Q8328	1-801-806-11	TRANSISTOR DTC144EKA-T146		R8321	1-216-105-91	RES,CHIP 220K	5% 1/10W
Q8329	8-729-230-49	TRANSISTOR 2SC2712-YG		R8322	1-216-022-00	RES,CHIP 75	5% 1/10W
Q8330	8-729-230-49	TRANSISTOR 2SC2712-YG		R8323	1-216-295-91	SHORT 0	
Q8331	8-729-230-49	TRANSISTOR 2SC2712-YG		R8324	1-216-295-91	SHORT 0	
Q8332	8-729-230-49	TRANSISTOR 2SC2712-YG		R8325	1-216-295-91	SHORT 0	
Q8333	8-729-230-49	TRANSISTOR 2SC2712-YG		R8326	1-216-113-00	RES,CHIP 470K	5% 1/10W
Q8334	8-729-230-49	TRANSISTOR 2SC2712-YG		R8327	1-216-295-91	SHORT 0	
Q8335	8-729-230-49	TRANSISTOR 2SC2712-YG		R8328	1-216-113-00	RES,CHIP 470K	5% 1/10W
Q8336	8-729-230-49	TRANSISTOR 2SC2712-YG		R8329	1-216-113-00	RES,CHIP 470K	5% 1/10W
Q8337	8-729-230-49	TRANSISTOR 2SC2712-YG		R8330	1-216-022-00	RES,CHIP 75	5% 1/10W
Q8342	8-729-230-49	TRANSISTOR 2SC2712-YG		R8331	1-216-295-91	SHORT 0	
Q8343	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R		R8332	1-216-295-91	SHORT 0	
Q8344	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R		R8333	1-216-295-91	SHORT 0	
Q8349	8-729-230-49	TRANSISTOR 2SC2712-YG		R8334	1-216-295-91	SHORT 0	
Q8350	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R		R8335	1-216-065-91	RES,CHIP 4.7K	5% 1/10W
Q8351	8-729-230-49	TRANSISTOR 2SC2712-YG		R8336	1-216-065-91	RES,CHIP 4.7K	5% 1/10W
Q8352	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R		R8337	1-216-022-00	RES,CHIP 75	5% 1/10W
Q8353	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R		R8338	1-216-065-91	RES,CHIP 4.7K	5% 1/10W
Q8354	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R		R8339	1-216-065-91	RES,CHIP 4.7K	5% 1/10W
Q8355	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R		R8340	1-216-065-91	RES,CHIP 4.7K	5% 1/10W
Q8358	1-801-806-11	TRANSISTOR DTC144EKA-T146		R8341	1-216-065-91	RES,CHIP 4.7K	5% 1/10W
Q8359	1-801-806-11	TRANSISTOR DTC144EKA-T146		R8342	1-216-065-91	RES,CHIP 4.7K	5% 1/10W
Q8360	1-801-806-11	TRANSISTOR DTC144EKA-T146		R8343	1-216-065-91	RES,CHIP 4.7K	5% 1/10W
Q8361	8-729-230-49	TRANSISTOR 2SC2712-YG		R8344	1-216-022-00	RES,CHIP 75	5% 1/10W
Q8362	8-729-230-49	TRANSISTOR 2SC2712-YG		R8348	1-216-057-00	RES,CHIP 2.2K	5% 1/10W
Q8363	8-729-230-49	TRANSISTOR 2SC2712-YG		R8349	1-216-049-91	RES,CHIP 1K	5% 1/10W
Q8464	8-729-230-49	TRANSISTOR 2SC2712-YG		R8350	1-216-049-91	RES,CHIP 1K	5% 1/10W
Q8465	8-729-230-49	TRANSISTOR 2SC2712-YG		R8351	1-216-065-91	RES,CHIP 4.7K	5% 1/10W
Q8466	8-729-230-49	TRANSISTOR 2SC2712-YG		R8352	1-216-065-91	RES,CHIP 4.7K	5% 1/10W
				R8353	1-216-017-91	RES,CHIP 47	5% 1/10W
				R8354	1-216-017-91	RES,CHIP 47	5% 1/10W

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REF. NO.	PART NO.	DESCRIPTION	REMARK			REF. NO.	PART NO.	DESCRIPTION	REMARK		
R8355	1-216-295-91	SHORT	0			R8422	1-216-295-91	SHORT	0		
R8356	1-216-295-91	SHORT	0			R8424	1-216-083-00	RES,CHIP	27K	5%	1/10W
R8357	1-216-017-91	RES,CHIP	47	5%	1/10W	R8425	1-216-089-91	RES,CHIP	47K	5%	1/10W
R8358	1-216-017-91	RES,CHIP	47	5%	1/10W	R8426	1-208-796-11	METAL CHIP	3.9K	0.50%	1/10W
R8361	1-216-017-91	RES,CHIP	47	5%	1/10W	R8428	1-216-295-91	SHORT	0		
R8362	1-216-017-91	RES,CHIP	47	5%	1/10W	R8429	1-216-295-91	SHORT	0		
R8363	1-208-773-11	METAL CHIP	430	0.50%	1/10W	R8430	1-216-295-91	SHORT	0		
R8364	1-216-041-00	RES,CHIP	470	5%	1/10W	R8431	1-216-049-91	RES,CHIP	1K	5%	1/10W
R8365	1-216-049-91	RES,CHIP	1K	5%	1/10W	R8432	1-216-049-91	RES,CHIP	1K	5%	1/10W
R8366	1-216-049-91	RES,CHIP	1K	5%	1/10W	R8433	1-216-049-91	RES,CHIP	1K	5%	1/10W
R8367	1-216-041-00	RES,CHIP	470	5%	1/10W	R8434	1-216-049-91	RES,CHIP	1K	5%	1/10W
R8369	1-216-041-00	RES,CHIP	470	5%	1/10W	R8435	1-216-295-91	SHORT	0		
R8370	1-216-025-91	RES,CHIP	100	5%	1/10W	R8436	1-216-017-91	RES,CHIP	47	5%	1/10W
R8372	1-216-295-91	SHORT	0			R8437	1-216-025-91	RES,CHIP	100	5%	1/10W
R8373	1-216-295-91	SHORT	0			R8438	1-216-025-91	RES,CHIP	100	5%	1/10W
R8374	1-216-039-00	RES,CHIP	390	5%	1/10W	R8440	1-216-295-91	SHORT	0		
R8375	1-216-041-00	RES,CHIP	470	5%	1/10W	R8441	1-216-049-91	RES,CHIP	1K	5%	1/10W
R8376	1-216-049-91	RES,CHIP	1K	5%	1/10W	R8442	1-216-049-91	RES,CHIP	1K	5%	1/10W
R8377	1-216-025-91	RES,CHIP	100	5%	1/10W	R8443	1-216-025-91	RES,CHIP	100	5%	1/10W
R8378	1-216-033-00	RES,CHIP	220	5%	1/10W	R8444	1-216-025-91	RES,CHIP	100	5%	1/10W
R8379	1-216-033-00	RES,CHIP	220	5%	1/10W	R8445	1-216-017-91	RES,CHIP	47	5%	1/10W
R8380	1-216-025-91	RES,CHIP	100	5%	1/10W	R8446	1-216-049-91	RES,CHIP	1K	5%	1/10W
R8381	1-216-025-91	RES,CHIP	100	5%	1/10W	R8447	1-216-025-91	RES,CHIP	100	5%	1/10W
R8382	1-216-033-00	RES,CHIP	220	5%	1/10W	R8448	1-216-025-91	RES,CHIP	100	5%	1/10W
R8383	1-216-033-00	RES,CHIP	220	5%	1/10W	R8449	1-216-025-91	RES,CHIP	100	5%	1/10W
R8384	1-216-025-91	RES,CHIP	100	5%	1/10W	R8450	1-216-089-91	RES,CHIP	47K	5%	1/10W
R8385	1-216-025-91	RES,CHIP	100	5%	1/10W	R8451	1-216-097-91	RES,CHIP	100K	5%	1/10W
R8386	1-216-025-91	RES,CHIP	100	5%	1/10W	R8452	1-216-089-91	RES,CHIP	47K	5%	1/10W
R8388	1-216-031-00	RES,CHIP	180	5%	1/10W	R8453	1-216-097-91	RES,CHIP	100K	5%	1/10W
R8389	1-216-033-00	RES,CHIP	220	5%	1/10W	R8454	1-216-089-91	RES,CHIP	47K	5%	1/10W
R8390	1-208-773-11	METAL CHIP	430	0.50%	1/10W	R8455	1-216-097-91	RES,CHIP	100K	5%	1/10W
R8391	1-216-041-00	RES,CHIP	470	5%	1/10W	R8456	1-216-049-91	RES,CHIP	1K	5%	1/10W
R8393	1-216-037-00	RES,CHIP	330	5%	1/10W	R8457	1-216-049-91	RES,CHIP	1K	5%	1/10W
R8394	1-216-041-00	RES,CHIP	470	5%	1/10W	R8458	1-216-049-91	RES,CHIP	1K	5%	1/10W
R8395	1-216-033-00	RES,CHIP	220	5%	1/10W	R8459	1-216-025-91	RES,CHIP	100	5%	1/10W
R8396	1-216-033-00	RES,CHIP	220	5%	1/10W	R8460	1-216-025-91	RES,CHIP	100	5%	1/10W
R8398	1-216-025-91	RES,CHIP	100	5%	1/10W	R8461	1-216-025-91	RES,CHIP	100	5%	1/10W
R8399	1-216-025-91	RES,CHIP	100	5%	1/10W	R8462	1-216-089-91	RES,CHIP	47K	5%	1/10W
R8400	1-216-025-91	RES,CHIP	100	5%	1/10W	R8463	1-216-097-91	RES,CHIP	100K	5%	1/10W
R8401	1-216-081-00	RES,CHIP	22K	5%	1/10W	R8464	1-216-025-91	RES,CHIP	100	5%	1/10W
R8404	1-216-033-00	RES,CHIP	220	5%	1/10W	R8465	1-216-025-91	RES,CHIP	100	5%	1/10W
R8405	1-216-033-00	RES,CHIP	220	5%	1/10W	R8466	1-216-025-91	RES,CHIP	100	5%	1/10W
R8406	1-216-033-00	RES,CHIP	220	5%	1/10W	R8467	1-216-041-00	RES,CHIP	470	5%	1/10W
R8407	1-216-033-00	RES,CHIP	220	5%	1/10W	R8468	1-216-041-00	RES,CHIP	470	5%	1/10W
R8408	1-216-033-00	RES,CHIP	220	5%	1/10W	R8469	1-216-041-00	RES,CHIP	470	5%	1/10W
R8409	1-216-295-91	SHORT	0			R8470	1-216-069-00	RES,CHIP	6.8K	5%	1/10W
R8410	1-216-295-91	SHORT	0			R8471	1-216-025-91	RES,CHIP	100	5%	1/10W
R8411	1-216-083-00	RES,CHIP	27K	5%	1/10W	R8472	1-216-089-91	RES,CHIP	47K	5%	1/10W
R8412	1-216-073-00	RES,CHIP	10K	5%	1/10W	R8473	1-216-025-91	RES,CHIP	100	5%	1/10W
R8413	1-216-041-00	RES,CHIP	470	5%	1/10W	R8474	1-216-097-91	RES,CHIP	100K	5%	1/10W
R8414	1-208-796-11	METAL CHIP	3.9K	0.50%	1/10W	R8475	1-216-089-91	RES,CHIP	47K	5%	1/10W
R8415	1-216-049-91	RES,CHIP	1K	5%	1/10W	R8476	1-216-031-00	RES,CHIP	180	5%	1/10W
R8417	1-216-025-91	RES,CHIP	100	5%	1/10W	R8477	1-216-033-00	RES,CHIP	220	5%	1/10W
R8418	1-216-025-91	RES,CHIP	100	5%	1/10W	R8478	1-216-089-91	RES,CHIP	47K	5%	1/10W
R8419	1-216-017-91	RES,CHIP	47	5%	1/10W	R8479	1-216-097-91	RES,CHIP	100K	5%	1/10W
R8420	1-216-017-91	RES,CHIP	47	5%	1/10W	R8480	1-216-073-00	RES,CHIP	10K	5%	1/10W
R8421	1-216-295-91	SHORT	0			R8481	1-216-095-00	RES,CHIP	82K	5%	1/10W

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V (KV-ES34M31/M61 ONLY)

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R8482	1-216-089-91	RES,CHIP	47K 5% 1/10W	R8582	1-208-291-11	RES,CHIP	4.7M 5% 1/10W
R8484	1-216-045-00	RES,CHIP	680 5% 1/10W	R8583	1-208-291-11	RES,CHIP	4.7M 5% 1/10W
R8485	1-216-037-00	RES,CHIP	330 5% 1/10W	R8584	1-208-291-11	RES,CHIP	4.7M 5% 1/10W
R8486	1-216-049-91	RES,CHIP	1K 5% 1/10W	R8585	1-208-291-11	RES,CHIP	4.7M 5% 1/10W
R8487	1-216-045-00	RES,CHIP	680 5% 1/10W	R8586	1-208-291-11	RES,CHIP	4.7M 5% 1/10W
R8488	1-216-041-00	RES,CHIP	470 5% 1/10W	R8587	1-216-295-91	SHORT	0
R8489	1-216-049-91	RES,CHIP	1K 5% 1/10W	R8588	1-216-041-00	RES,CHIP	470 5% 1/10W
R8490	1-216-049-91	RES,CHIP	1K 5% 1/10W	R8589	1-216-041-00	RES,CHIP	470 5% 1/10W
R8491	1-216-025-91	RES,CHIP	100 5% 1/10W	R8590	1-216-041-00	RES,CHIP	470 5% 1/10W
R8492	1-216-041-00	RES,CHIP	470 5% 1/10W	R8592	1-216-295-91	SHORT	0
R8493	1-216-081-00	RES,CHIP	22K 5% 1/10W	R8594	1-216-295-91	SHORT	0
R8494	1-216-041-00	RES,CHIP	470 5% 1/10W	R8595	1-216-041-00	RES,CHIP	470 5% 1/10W
R8495	1-216-081-00	RES,CHIP	22K 5% 1/10W	R8596	1-216-041-00	RES,CHIP	470 5% 1/10W
R8496	1-216-049-91	RES,CHIP	1K 5% 1/10W	R8597	1-216-041-00	RES,CHIP	470 5% 1/10W
R8497	1-216-025-91	RES,CHIP	100 5% 1/10W	<CRYSTAL>			
R8498	1-216-043-91	RES,CHIP	560 5% 1/10W	X8301	1-781-612-11	VIBRATOR, CRYSTAL	
R8499	1-216-081-00	RES,CHIP	22K 5% 1/10W	X8302	1-781-612-11	VIBRATOR, CRYSTAL	
R8500	1-216-033-00	RES,CHIP	220 5% 1/10W	*****			
R8501	1-216-081-00	RES,CHIP	22K 5% 1/10W	* A-1342-516-A V BOARD MOUNTED (KV-ES34M31/M61 ONLY)			
R8502	1-216-049-91	RES,CHIP	1K 5% 1/10W	*****			
R8503	1-216-097-91	RES,CHIP	100K 5% 1/10W	<CAPACITOR>			
R8507	1-216-025-91	RES,CHIP	100 5% 1/10W	C1803	1-104-665-11	ELECT	100MF 20% 16V
R8508	1-216-025-91	RES,CHIP	100 5% 1/10W	C1804	1-163-989-11	CERAMIC CHIP	0.033MF 10% 25V
R8509	1-216-025-91	RES,CHIP	100 5% 1/10W	C1805	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
R8510	1-216-041-00	RES,CHIP	470 5% 1/10W	C1806	1-163-105-00	CERAMIC CHIP	33PF 5% 50V
R8512	1-216-017-91	RES,CHIP	47 5% 1/10W	C1807	1-163-105-00	CERAMIC CHIP	33PF 5% 50V
R8513	1-216-039-00	RES,CHIP	390 5% 1/10W	C1808	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
R8514	1-216-039-00	RES,CHIP	390 5% 1/10W	C1809	1-104-665-11	ELECT	100MF 20% 16V
R8515	1-216-295-91	SHORT	0	C1810	1-163-009-11	CERAMIC CHIP	0.001MF 10% 50V
R8516	1-216-049-91	RES,CHIP	1K 5% 1/10W	C1811	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
R8518	1-216-047-91	RES,CHIP	820 5% 1/10W	C1812	1-104-665-11	ELECT	100MF 20% 16V
R8519	1-216-047-91	RES,CHIP	820 5% 1/10W	C1813	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
R8528	1-216-025-91	RES,CHIP	100 5% 1/10W	C1815	1-163-243-11	CERAMIC CHIP	47PF 5% 50V
R8530	1-216-041-00	RES,CHIP	470 5% 1/10W	C1819	1-164-005-11	CERAMIC CHIP	0.47MF 25V
R8532	1-216-041-00	RES,CHIP	470 5% 1/10W	C1821	1-163-001-11	CERAMIC CHIP	220PF 10% 50V
R8533	1-216-041-00	RES,CHIP	470 5% 1/10W	C1822	1-104-666-11	ELECT	220MF 20% 16V
R8536	1-216-025-91	RES,CHIP	100 5% 1/10W	C1824	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
R8538	1-216-041-00	RES,CHIP	470 5% 1/10W	C1826	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
R8540	1-216-041-00	RES,CHIP	470 5% 1/10W	C1827	1-104-666-11	ELECT	220MF 20% 16V
R8541	1-216-039-00	RES,CHIP	390 5% 1/10W	C1828	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
R8551	1-216-049-91	RES,CHIP	1K 5% 1/10W	C1829	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V
R8557	1-216-049-91	RES,CHIP	1K 5% 1/10W	<CONNECTOR>			
R8558	1-208-776-11	METAL CHIP	560 0.50% 1/10W	CN1801	1-793-496-11	CONNECTOR, BOARD TO BOARD 20P	
R8561	1-216-049-91	RES,CHIP	1K 5% 1/10W	<DIODE>			
R8562	1-208-776-11	METAL CHIP	560 0.50% 1/10W	D1802	8-719-073-01	DIODE MA111-(K8).S0	
R8564	1-216-025-91	RES,CHIP	100 5% 1/10W	D1803	8-719-073-01	DIODE MA111-(K8).S0	
R8565	1-216-049-91	RES,CHIP	1K 5% 1/10W	D1809	8-719-073-01	DIODE MA111-(K8).S0	
R8566	1-208-776-11	METAL CHIP	560 0.50% 1/10W	D1810	8-719-073-01	DIODE MA111-(K8).S0	
R8567	1-216-017-91	RES,CHIP	47 5% 1/10W				
R8569	1-208-800-11	METAL CHIP	5.6K 0.50% 1/10W				
R8570	1-216-017-91	RES,CHIP	47 5% 1/10W				
R8572	1-208-800-11	METAL CHIP	5.6K 0.50% 1/10W				
R8573	1-216-017-91	RES,CHIP	47 5% 1/10W				
R8575	1-208-800-11	METAL CHIP	5.6K 0.50% 1/10W				
R8576	1-216-013-00	RES,CHIP	33 5% 1/10W				
R8577	1-216-295-91	SHORT	0				
R8578	1-216-033-00	RES,CHIP	220 5% 1/10W				
R8579	1-216-295-91	SHORT	0				

V (KV-ES34M31/M61 ONLY)

VM

REF. NO.	PART NO.	DESCRIPTION	REMARK
<FERRITE BEAD>			
FB1801	1-410-397-21	FERRITE 1.1UH	
FB1802	1-410-397-21	FERRITE 1.1UH	
FB1803	1-410-397-21	FERRITE 1.1UH	
FB1804	1-410-397-21	FERRITE 1.1UH	
FB1805	1-410-397-21	FERRITE 1.1UH	
<IC>			
IC1801	8-759-652-13	IC SDA5254-2B006	
IC1802	8-759-239-14	IC TA78L05S	
IC1803	8-759-042-02	IC S-80743AL-A7-T1	
<COIL>			
L1801	1-408-602-31	INDUCTOR 8.2UH	
<TRANSISTOR>			
Q1802	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1803	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1804	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q1805	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q1806	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
<RESISTOR>			
R1802	1-216-295-91	SHORT 0	
R1804	1-208-792-11	METAL CHIP 2.7K	0.50% 1/10W
R1805	1-216-025-91	RES,CHIP 100	5% 1/10W
R1806	1-216-025-91	RES,CHIP 100	5% 1/10W
R1807	1-208-816-11	METAL CHIP 27K	0.50% 1/10W
R1808	1-216-025-91	RES,CHIP 100	5% 1/10W
R1809	1-208-758-11	METAL CHIP 100	0.50% 1/10W
R1811	1-208-758-11	METAL CHIP 100	0.50% 1/10W
R1812	1-216-295-91	SHORT 0	
R1813	1-208-758-11	METAL CHIP 100	0.50% 1/10W
R1814	1-216-295-91	SHORT 0	
R1815	1-216-295-91	SHORT 0	
R1816	1-216-295-91	SHORT 0	
R1820	1-216-121-91	RES,CHIP 1M	5% 1/10W
R1821	1-216-041-00	RES,CHIP 470	5% 1/10W
R1822	1-216-025-91	RES,CHIP 100	5% 1/10W
R1823	1-216-089-91	RES,CHIP 47K	5% 1/10W
R1824	1-216-049-91	RES,CHIP 1K	5% 1/10W
R1825	1-216-041-00	RES,CHIP 470	5% 1/10W
R1826	1-216-049-91	RES,CHIP 1K	5% 1/10W
R1827	1-216-037-00	RES,CHIP 330	5% 1/10W
R1829	1-216-053-00	RES,CHIP 1.5K	5% 1/10W
R1830	1-216-063-91	RES,CHIP 3.9K	5% 1/10W
R1831	1-216-073-00	RES,CHIP 10K	5% 1/10W
R1832	1-215-859-00	METAL OXIDE 22	5% 1W F
R1833	1-216-065-91	RES,CHIP 4.7K	5% 1/10W
R1834	1-216-065-91	RES,CHIP 4.7K	5% 1/10W
R1835	1-216-049-91	RES,CHIP 1K	5% 1/10W
R1836	1-216-049-91	RES,CHIP 1K	5% 1/10W
R1837	1-216-049-91	RES,CHIP 1K	5% 1/10W

REF. NO.	PART NO.	DESCRIPTION	REMARK
R1838	1-216-025-91	RES,CHIP 100	5% 1/10W
R1839	1-216-025-91	RES,CHIP 100	5% 1/10W
R1840	1-216-025-91	RES,CHIP 100	5% 1/10W
R1841	1-216-065-91	RES,CHIP 4.7K	5% 1/10W
<CRYSTAL>			
X1801	1-781-685-21	VIBRATOR, CRYSTAL	
*****			
* A-1342-515-A VM BOARD MOUNTED			
*****			
4-382-854-11		SCREW (M3X10), P, SW (+)	
<CAPACITOR>			
C5401	1-126-935-11	ELECT 470MF	20% 16V
C5402	1-137-194-81	MYLAR 0.47MF	5% 50V
C5403	1-126-935-11	ELECT 470MF	20% 6.3V
C5405	1-126-933-11	ELECT 100MF	20% 16V
C5406	1-126-935-11	ELECT 470MF	20% 6.3V
C5407	1-107-364-11	MYLAR 0.01MF	10% 200V
C5408	1-107-364-11	MYLAR 0.01MF	10% 200V
C5409	1-107-649-11	ELECT 2.2MF	20% 250V
C5410	1-130-471-00	MYLAR 0.001MF	5% 50V
C5411	1-130-471-00	MYLAR 0.001MF	5% 50V
C5412	1-126-935-11	ELECT 470MF	20% 16V
C5413	1-107-648-91	ELECT 100MF	20% 160V
C5415	1-104-999-11	MYLAR 0.1MF	10% 200V
C5418	1-107-638-11	ELECT 33MF	20% 160V
<CONNECTOR>			
CN5401*	1-770-723-11	CONNECTOR, BOARD TO BOARD 8P	
CN5402	1-764-334-11	PLUG, CONNECTOR 11P	
<DIODE>			
D540	8-719-911-19	DIODE 1SS119-25	
D5401	8-719510-02	DIODE D1NS4	
D5402	8-719-911-19	DIODE 1SS119-25	
D5403	8-719-911-19	DIODE 1SS119-25	
D5404	8-719-911-19	DIODE 1SS119-25	
D5405	8-719-110-56	DIODE RD22ESB1	
D5406	8-719-110-56	DIODE RD22ESB1	
<COIL>			
L5400	1-412-525-31	INDUCTOR 10UH	
<TRANSISTOR>			
Q5400	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q5401	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q5402	8-729-119-78	TRANSISTOR 2SC2785-HFE	

The components identified by shading  
and mark  $\triangle$  are critical for safety.  
Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION				REMARK
Q5403	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q5404	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q5405	8-729-026-39	TRANSISTOR 2SA933AS-QT				
Q5405	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q5405	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q5406	8-729-045-05	TRANSISTOR 2SA2005				
Q5407	8-729-045-04	TRANSISTOR 2SC5511				
<RESISTOR>						
R5401	1-247-847-91	CARBON	4.7K	5%	1/4W	
R5402	1-249-415-11	CARBON	680	5%	1/4W	
R5403	1-247-739-11	CARBON	100	5%	1/2W F	
R5404	1-249-418-11	CARBON	1.2K	5%	1/4W	
R5406	1-249-425-11	CARBON	4.7K	5%	1/4W	
R5407	1-249-399-11	CARBON	33	5%	1/4W	
R5408	1-247-807-31	CARBON	100	5%	1/4W	
R5409	1-247-815-91	CARBON	220	5%	1/4W	
R5410	1-249-401-11	CARBON	47	5%	1/4W	
R5411	1-249-401-11	CARBON	47	5%	1/4W	
R5412	1-249-429-11	CARBON	10K	5%	1/4W	
R5413	1-249-414-11	CARBON	560	5%	1/4W F	
R5414	1-249-432-11	CARBON	18K	5%	1/4W	
R5415	1-247-739-11	CARBON	100	5%	1/2W F	
R5416	1-249-385-11	CARBON	2.2	5%	1/4W F	
R5417	1-249-432-11	CARBON	18K	5%	1/4W	
R5418	1-249-414-11	CARBON	560	5%	1/4W	
R5419	1-249-421-11	CARBON	2.2K	5%	1/4W	
R5420	1-249-421-11	CARBON	2.2K	5%	1/4W	
R5421	1-249-385-11	CARBON	2.2	5%	1/4W F	
R5422	1-249-405-11	CARBON	100	5%	1/4W F	
R5423	1-215-915-11	METAL OXIDE	470	5%	3W F	
R5424	1-249-395-11	CARBON	15	5%	1/4W	
R5425	1-249-401-11	CARBON	47	5%	1/4W	
R5427	1-249-395-11	CARBON	15	5%	1/4W	

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MISCELLANEOUS

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1-251-374-13	CAP ASSY, HIGH-VOLTAGE
$\triangle$ 1-419-293-11	COIL, DEGAUSSING
1-452-014-11	CIRCULAR DISC MAGNET B
1-452-032-11	MAGNET, DISC
1-452-896-11	COIL, NA ROTATION (RT200)

REF. NO.	PART NO.	DESCRIPTION	REMARK
	1-505-473-11	SPEAKER (12CM)	
	1-529-562-11	SPEAKER (7X4CM)	
	1-543-827-31	CLAMP, SLEEVE FERRITE	
$\triangle$	1-769-175-21	CABLE, ANTENNA (WITH FILTER)	
	1-790-082-11	CABLE, RF	

$\triangle$	1-791-439-11	CORD, POWER (WITH CONNECTOR) (KV-ES34M61/ES34M80)
$\triangle$	1-792-035-11	CORD, POWER (WITH FILTER) (KV-ES34M31)
$\triangle$	1-790-299-11	CORD, POWER (WITH NOISE FILTER (KV-ES34M90)
$\triangle$	8-451-500-31	DEFLECTION YOKE (Y34RSC2-M3)
	8-453-007-31	NA324-M3

$\triangle$	8-735-063-05	PICTURE TUBE A80LPD10X (KV-ES34M61)
$\triangle$	8-735-065-05	PICTURE TUBE A80LPD10X (KV-ES34M31)
$\triangle$	8-735-062-05	PICTURE TUBE A80LPD10X (KV-ES34M80)
$\triangle$	8-735-064-05	PICTURE TUBE A80LPD10X (KV-ES34M90)
$\triangle$	1-419-295-11	COIL, LANDING CORRECTION (Except KV-ES34M31)

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ACCESSORIES AND PACKING MATERIALS

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1-569-008-21	ADAPTOR, CONVERSION 2P (KV-ES34M80/ES34M90 only)
1-769-175-21	CABLE, ANTENNA (WITH FILTER)
3-701-910-00	SCREW, SPECIAL (DIA. 3.8X20)
3-867-756-21	MANUAL, INSTRUCTION (KV-ES34M31/ES34M80)
3-867-756-31	MANUAL, INSTRUCTION (KV-ES34M80)
3-867-756-11	MANUAL, INSTRUCTION (KV-ES34M90)
3-867-756-51	MANUAL, INSTRUCTION (KV-ES34M61)
4-392-004-11	CLIP
4-392-003-01	BAND, HOLD

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REMOTE COMMANDER

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1-418-566-11	REMOTE COMMANDER (RM-916)
4-074-721-01	BATTERY COVER, REMOTE COMMANDER

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